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MARINE CORPS ORDER P3500.88


From: Commandant of the Marine Corps
To: Distribution List

Subj: AVIATION TRAINING AND READINESS (T&R) MANUAL, KC-130FRT
(SHORT TITLE: KC-130FRT T&R MANUAL)

Ref: (a) MCO P3500.14H
(b) MCO 5215.1H

Encl: (1) LOCATOR SHEET

1. Purpose. To publish policies, procedures and standards regarding the training of KC-130FRT aircrew, per reference (a).
2. Cancellation. MCO P3500.15C, T&R Manual, Volume 2, Chapters 6-10.
3. Background. Significant changes to reference (a) directed a revision to this Manual in the following categories: Unit Mission Statement, Unit Core Capability Statement, Unit Mission Essential Task List, Unit Core Skill Proficiency requirements, Unit Instructor requirements, and T&R syllabi structure. Reference (a) prescribes a unique template to provide the commander with standardized programs of instruction. As such, this Order deviates from the five paragraph order format outlined in reference (b).
4. Recommendations. Recommended changes to this Order are invited, and may be submitted via the syllabus sponsor and the appropriate chain of command to: Commanding General, Training and Education Command (C 4610), Marine Corps Combat Development Command, 3300 Russell Road, Quantico, VA 22134-5001.
5. Applicability. This Manual is applicable to the Marine Corps Total Force.
6. Certification. Reviewed and approved this date.


T. S. JONES
By direction

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T&R MANUAL, KC-130FRT

RECORD OF CHANGES

Log completed change action as indicated.

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T&R MANUAL, KC-130FRT

CHAPTER 1

KC-130FRT PILOT

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CHAPTER 1

KC-130FRT PILOT

100. MARINE AERIAL REFUELING SQUADRON (KC-130FRT) UNIT CORE COMPETENCY

1. Background. Marine Aviation plays a crucial role in the MAGTF's ability to conduct Maneuver Warfare. The ultimate goal of Marine Aviation is to attain the highest possible combat readiness to support Expeditionary Maneuver Warfare while at the same time preserving and conserving our Marines and equipment. Embedded within our combat readiness is the ability to rapidly, effectively, and efficiently deploy on short notice and the ability to quickly and effectively plan for crises and/or contingency operations thereby ensuring Marine Aviation remains ready for combat when and where the need arises. The KC-130FRT T&R Manual represents the collaborative effort of KC-130FRT Subject Matter Experts who designed training standards to maximize the full combat capabilities of the KC-130FRT and its crew. These standards, intrinsic in the core competency section, describe and define unit capabilities and requirements necessary to maintain like-squadron proficiency in core skills and combat leadership. Training events are based on specific requirements and performance standards to ensure aircrew maintain a common base of training and depth of combat capabilities. Together, the T&R comprises a building block approach to ensure that trained aircrews remain ready, relevant, and fully capable of supporting the MAGTF commander.

2. VMGR Mission. Support the MAGTF Commander by providing aerial refueling and assault support, day or night under all weather conditions during expeditionary, joint, or combined operations.

3. Mission Essential Task List (METL)

- a. (UJTL TA 1.1.1) Conduct Tactical Airlift
 - Conduct assault support transport.
- b. (UJTL TA 1.1.4) Conduct Sea and Air Deployment Operations
 - Maintain the capability to deploy and operate from advanced bases, expeditionary airfields and forward operating bases.
 - Perform organizational maintenance on assigned aircraft.
- c. (UJTL TA 1.2.2) Conduct Airborne Operations
 - Provide air delivered assault support transport of combat troops, equipment and supplies.
 - Provide support for casualty evacuation operations.
 - Maintain self-defense capability from ground-to-air and air-to-air threats.
- d. (UJTL TA 4.2) Distribute Supplies and Provide Transport Services
 - Conduct aerial re-supply.
 - Provide support for mobile Forward Arming and Refueling Points (FARPS).
 - Provide support for Rapid Ground Refueling (RGR) of aircraft and vehicles.
- e. (UJTL TA 4.2.3) Conduct Air Refueling
 - Provide Tactical and Long Range Aerial Refueling.

- f. (UJTL TA 5) Exercise Command and Control
 - Provide Airborne Platform for the Airborne DASC Command Post.
- g. (UJTL TA 6.2) Conduct Joint Personnel Recovery
 - Conduct Tactical Recovery of Aircraft and Personnel (TRAP) operations.
 - Augment local Search and Rescue (SAR) assets
- h. (UJTL TA 6.4) Conduct Noncombatant Evacuation
 - Provide support for evacuation operations.

4. Table of Organization. Refer to Table of Organization 8820 and 8821 managed by Total Force Structure, MCCDC, for current authorized organizational structure and personnel strength for KC-130FRT units. As of this publication date, KC-130F/R/T units are authorized:

Squadron
 12 Aircraft
 42 Pilots [26 TPC/16 CP (T2P or T3P)]
 23 TSOs
 25 Flight Engineers
 24 Loadmasters
 24 Flight Mechanics

Detachment
 6 Aircraft
 19 Pilots [11 TPC/8 CP (T2P or T3P)]
 11 TSOs
 12 Flight Engineers
 12 Loadmasters
 12 Flight Mechanics

5. Core Capability. A core capable squadron is able to sustain 9 sorties on a daily basis during contingency/combat operations. The above sortie rates are based on 3.0 hour average sortie duration and assumes \geq 70 percent FMC aircraft and \geq 90 percent T/O aircrew on hand. If unit FMC aircraft < 70 percent or T/O aircrew < 90 percent, core capability will be degraded by a like percentage. A core capable squadron is able to accomplish all tasks designated in the unit METL from a main or expeditionary base.

6. METL/Core Skill Matrix. KC-130FRT core skills directly support the METL as follows:

	KC-130FRT CORE SKILL										CORE PLUS	
METL	AR	TACNAV	FORM	RGR	LRNAV	THRX (I)	THRX (R)	ALZ	NSQ	AD	LRAR	DEFTAC
A. Conduct Tactical Airlift		X	X		X	X	X	X	X			X
B. Conduct Sea and Air Deployment Operations			X		X	X	X	X	X		X	X
C. Conduct Airborne Operations		X	X		X	X	X		X	X		X
D. Distribute Supplies and Provide Transport Services		X		X	X	X	X	X	X	X	X	X
E. Conduct Air Refueling	X	X	X		X	X	X		X		X	X
F. Exercise Command and Control					X	X	X		X			X
G. Conduct Joint Personnel Recovery	X	X	X	X	X	X	X	X	X	X	X	X
H. Conduct Noncombatant Evacuation	X	X	X	X	X	X	X	X	X		X	X

7. KC-130FRT Core Model Minimum Requirements (CMMR). Squadron core competency reflects the minimum level of competency a squadron must achieve to perform its core capability. Squadron core competency is measured in terms of minimum Core Skill Proficiency (CSP) and minimum numbers of flight leaders per paragraphs a and b below:

a. Minimum Unit CSP Requirements. As a minimum, in order to be considered Core Competent, a unit must possess the following numbers of crews who are proficient in each core skill (Unit CSP). In order to be considered proficient in a core skill (individual CSP), a crewmember must attain and maintain proficiency in core skill events, as delineated in paragraphs (1) and (2) below.

* NOTE: DEFTAC and Long Range AAR (LRAR) are core plus skills. Proficiency in DEFTAC and LRAR is not required to obtain unit CSP and will not contribute to unit T-level readiness. Below are KC-130 community recommended unit/individual CSP standards for these skills.

KC-130FRT Unit CSP Requirements							
CORE SKILL *CORE PLUS	Pilot	Copilot	TSO	FE	LM	FM	Crews
AR	14	14	14	14	14	14	14
TACNAV	9	9	9	9	9	9	9
FORM	8	8		8			8
LRNAV	12	12	12	12	12	12	12
THR(X) (I)	6	6	6	6	6	6	6
THR(X) (R)	8		4	4			4
ALZ	9	9	9	9	9	9	9
RGR	6	6		6	6	6	6
NSQ	9	9	9	9	9	9	9
AD	4	4	4	4	8	4	4
**CPL					18		18
*LRAR	2		2				1
*DEFTAC	2/2		2	2	2	2	2

KC-130FRT Unit CSP Requirements Detachment							
CORE SKILL	Pilot	Copilot	TSO	FE	LM	FM	Crews
AR	7	7	7	7	7	7	7
TACNAV	5	5	5	5	5	5	5
FORM	4	4		4			4
LRNAV	6	6	6	6	6	6	6
THR(X) (I)	3	3	3	3	3	3	3
THR(X) (R)	4		2	2			2
ALZ	5	5	5	5	5	5	5
RGR	3	3	3	3	3	3	3
NSQ	5	5	5	5	5	5	5
AD	2	2	2	2	4	2	2
**CPL					9		9
LRAR	1		1				1
DEFTAC	4		2	2	2	2	2

** CPL is the Cargo and Passenger Loading core skill that applies to loadmasters only and is not included in the METL Core Skill Matrix.

(1) Events Required to Attain Individual CSP. To initially attain CSP, a crewmember must successfully complete all of the T&R events listed in the chart below for that core skill:

KC-130 Copilot Attain	RW/FW AR	RGR	ALZ EAF	AD	FORM	LONG RANGE NAV	TACNAV	THR(X) (I)	THR(X) (R)	NS	LRAR	DEFTAC
T&R event requirements to attain competency	210* 211 212* 213	274	270 271* 272	240 241*	230 231* 232	250	220 222 223* 224	260* 261		203* 204 205* 222 223* 224		

Notes:

1. Some events are duplicated in more than one category, but not in the overall total.
2. "*" Denotes R-coded events
3. Underlined events are simulator events.

KC-130 Pilot Attain	RW/FW AR	RGR	ALZ EAF	AD	FORM	LONG RANGE NAV	TACNAV	THR(X) (I)	THR(X) (R)	NS	LRAR	DEFTAC
T&R event requirements to attain competency	311* 312* 313	274	370* 371 372	340* 341	330* 331 332	250	320 321 322* 323 324*	260*	360 361*	323* 324* 303	311 312 333 493	462 463 464
Notes: 1. Some events are duplicated in more than one category, but not in the overall total. 2. "*" Denotes R-coded events. 3. Underlined events are simulator events.												

KC-130 Flight Engineer Attain	RW/FW AR	RGR	ALZ EAF	AD	FORM	LONG RANGE NAV	TACNAV	THR(X) (I)	THR(X) (R)	NS	DEFTAC
T&R event requirements to attain competency	210 211* 212 213* 313	274*	271* 272 273	241*	231*	250*	220* 223 224 321	260*	360	204* 205*	461 462
Notes: 1. Some events are duplicated in more than one category but not in the overall total. 2. "*" Denotes a Refresher Flight Engineer or an individual who needs to regain qualification(s).											

KC-130 Loadmaster Attain	RW/FW AR	RGR	ALZ	AD	CPL	LRNAV	TACNAV	THR(X) (I)	NS	DETFAC
T&R event requirements to attain competency	210 211 213	273 274	271 272 370	241 340	215 216 217 218	250	220 223 322	261	204 213 223 272	462

KC-130 TSO Attain	RW/FW AR	RGR	ALZ EAF	AD	FORM	LONG RANGE NAV	TACNAV	THR(X) (I)	THR(X) (R)	NS	LRAR	DEFTAC
T&R event requirements to attain competency	210 212 213		270 271 370	240 241 242 341		250	220 221 222 321 322 324	260 261	360 361	201 204 205	410 411	462

KC-130 Flight Mechanic Attain	RW/FW AR	RGR	ALZ EAF	AD	FORM	LONG RANGE NAV	TACNAV	THR(X) (I)	THR(X) (R)	NS	DEFTAC
T&R event requirements to attain competency	210 211* 212 213* 313	274*	271* 272	241*	231*	250*	220* 223 224 321	260*	360	203* 204*	461 462
Notes: 1. Some events are duplicated in more than one category but not in the overall total. 2. "*" Denotes a Refresher Flight Mechanic or someone who needs to regain qualification(s).											

(2) Events Required to Maintain Individual CSP. To maintain CSP, a crewmember must maintain proficiency in all of the T&R events listed in the chart below for that core skill.

KC-130 Copilot Maintain	RW/FW AR	RGR	ALZ EAF	AD	FORM	LONG RANGE NAV	TACNAV	THR(X) (I)	THR(X) (R)	NS	LRAR	DEFTAC
T&R event requirements to maintain competency	210 212	274	271	241	231	250	220 224	260		204 205		

KC-130 Pilot Maintain	RW/FW AR	RGR	ALZ EAF	AD	FORM	LONG RANGE NAV	TACNAV	THR(X) (I)	THR(X) (R)	NS	LRAR	DEFTAC
T&R event requirements to maintain competency	311 312	274	370	340	330	250	322 324	260	361	204 205 303	311 312 333 493	322 464

KC-130 Flight Engineer Maintain	RW/FW AR	RGR	ALZ EAF	AD	FORM	LONG RANGE NAV	TACNAV	THR(X) (I)	THR(X) (R)	NS	DEFTAC
T&R event requirements to maintain competency	211 212	274	271	241	231	250	224 321	261	360	204 205	462

KC-130 Loadmaster Maintain	RW/FW AR	RGR	ALZ	AD	CPL	LRNAV	TACNAV	THR(X) (I)	NS	DETFAC
T&R event requirements to maintain competency	213	274	272	241 340	215 216 217 218	250	223	261	213 223 272	462

KC-130 TSO Maintain	RW/FW AR	RGR	ALZ EAF	AD	FORM	LONG RANGE NAV	TACNAV	THR(X)(I)	THR(X)(R)	NS	LRAR	DEFTAC
T&R event requirements to maintain competency	210 213		271 370	241 242 341		250	223 322 324	261	361	204 205	411	462

KC-130 Flight Mechanic Maintain	RW/FW AR	RGR	ALZ EAF	AD	FORM	LONG RANGE NAV	TACNAV	THR(X)(I)	THR(X)(R)	NS	DEFTAC
T&R event requirements to maintain competency	211 213	274	271	241	231	250	224 321	260	360	204 205	461 462

b. Minimum Combat Leader Requirements. As a minimum, in order to be considered Core Competent, a unit must possess the following numbers of aircrew with the listed flight leadership designations.

	Squadron	
DESIGNATION	Pilot	Tactical Systems Operator
TPC	18	
SEC LDR	8	
DIV LDR	4	
TAC RAC	8	
RC		2
STRAT RAC	2	

	Detachment	
DESIGNATION	Pilots	Tactical Systems Operator
TPC	9	
SEC LDR	4	
DIV LDR	2	
TAC RAC	4	
RC		1
STRAT RAC	1	

8. Qualifications And Designations Table. The table below delineates T&R events required to be completed to attain initial qualifications, re-qualifications, and designations. All stage lectures, briefs, squadron training and prerequisites shall be complete prior to completing final events. Qualification and designation letters signed by the commanding officer shall be placed in individual NATOPS and APR/MPR jackets. Loss of proficiency in all qualification events of a core skill causes the associated

qualification to be lost. Regaining a qualification requires completing all R coded syllabus events associated with that qualification.

<u>Qualification</u> (TRACKING CODE)	Initial Event Qualification Requirements.
NSQ (686)	SNS-203, NS-204, NS-205, TACNAV-223, TACNAV-224
Instrument (681)	IAW OPNAVINST 3710.7 and an annual qualification letter signed by the commanding officer.
Special Instrument (682)	IAW OPNAVINST 3710.7 and an annual qualification letter signed by the commanding officer.
Right Seat LAT (620)	TACNAV-221.
LAT (621)	RQD-620, TACNAV-322
DEFTAC (661)	DEFTAC-464
T3P NATOPS Check (683)	Core Introduction Phase Complete.
T2P NATOPS Check (684)	RQD-683, Core Basic Phase Complete.
TPC NATOPS Check (685)	RQD-684, RQD-686, RQD-600 to 602 TPC Proficiency Review, RQD-603 TPC Simulator Upgrade Syllabus, RQD-604 TPC Route Check, Core Basic and Advanced Phases complete.

<u>Designation</u> (TRACKING CODE)	Designation Requirements.
FAM/INST I (FRS) (688)	SFAM-500/501, FAM-502, INST-503/504 and a designation letter signed by the commanding officer.
AR I (FRS) (689)	AR-510, AR-511 and a designation letter signed by the commanding officer.
TACNAV I (FRS) (690)	TACNAV-520, TACNAV-521 and a designation letter signed by the commanding officer.
FORM I (FRS) (691)	FORM-530, FORM-531 and a designation letter signed by the commanding officer.
AD I (FRS) (692)	AD-540, AD-541 and a designation letter signed by the commanding officer.
ALZ I (FRS) (693)	ALZ-570, ALZ-571 and a designation letter signed by the commanding officer.
Section Leader (631)	RQD-630 and a designation letter signed by the commanding officer.
Division Leader (633)	RQD-636, RQD-631, RQD-632 and a designation letter signed by the commanding officer.
Tactical RAC (636)	RQD-631 and a designation letter signed by the commanding officer.
Strategic RAC (637)	AR-493, RQD-633, RQD-636 and a designation letter signed by the commanding officer.
PMCFP (687)	RQD-685 and a designation letter signed by the commanding officer.
T&R I (694)	TR-580 and a designation letter signed by the commanding officer.
NI/ANI (695)	SNI-590, NI-591 and a designation letter signed by the commanding officer. NI requires certification by the model manager.
LATI (696)	See MAWTS-1 Course Catalog
DEFTACI (697)	See MAWTS-1 Course Catalog
NSI (698)	See MAWTS-1 Course Catalog
WTI (699)	See MAWTS-1 Course Catalog

9. Instructor Requirements. A squadron should possess the following numbers of aircrew with the listed instructor designations per the KC-130 T&R and MCO 3500.12C (WTPP).

KC-130 Squadron				
INSTRUCTOR DESIGNATION	Pilots	TSOs	Flight Engineers	Loadmasters
LATI	4			
ANI	6	4	6	4
WTI	2	2	2	2
DEFTACI	1			
NSI	3	3	3	3
T&RI	10	6	10	8

KC-130 Detachment				
INSTRUCTOR DESIGNATION	Pilots	TSOs	Flight Engineers	Loadmasters
LATI	2			
ANI	3	2	3	2
WTI	1	1	1	1
DEFTACI	1			
NSI	1	1	1	1
T&RI	5	3	5	4

10. Definitions

a. Currency. A control measure used to provide an additional margin of safety based on exposure frequency to a particular skill. It is a measure of time since the last event demanding that specific skill. Loss of currency does not affect a loss of Core Skill Proficiency (CSP). For example, currency determines minimum altitudes in rules of conduct based upon the most recent low altitude fly date. Specific currency requirements for individual type mission profiles can be found in the Aviation T&R Program Manual.

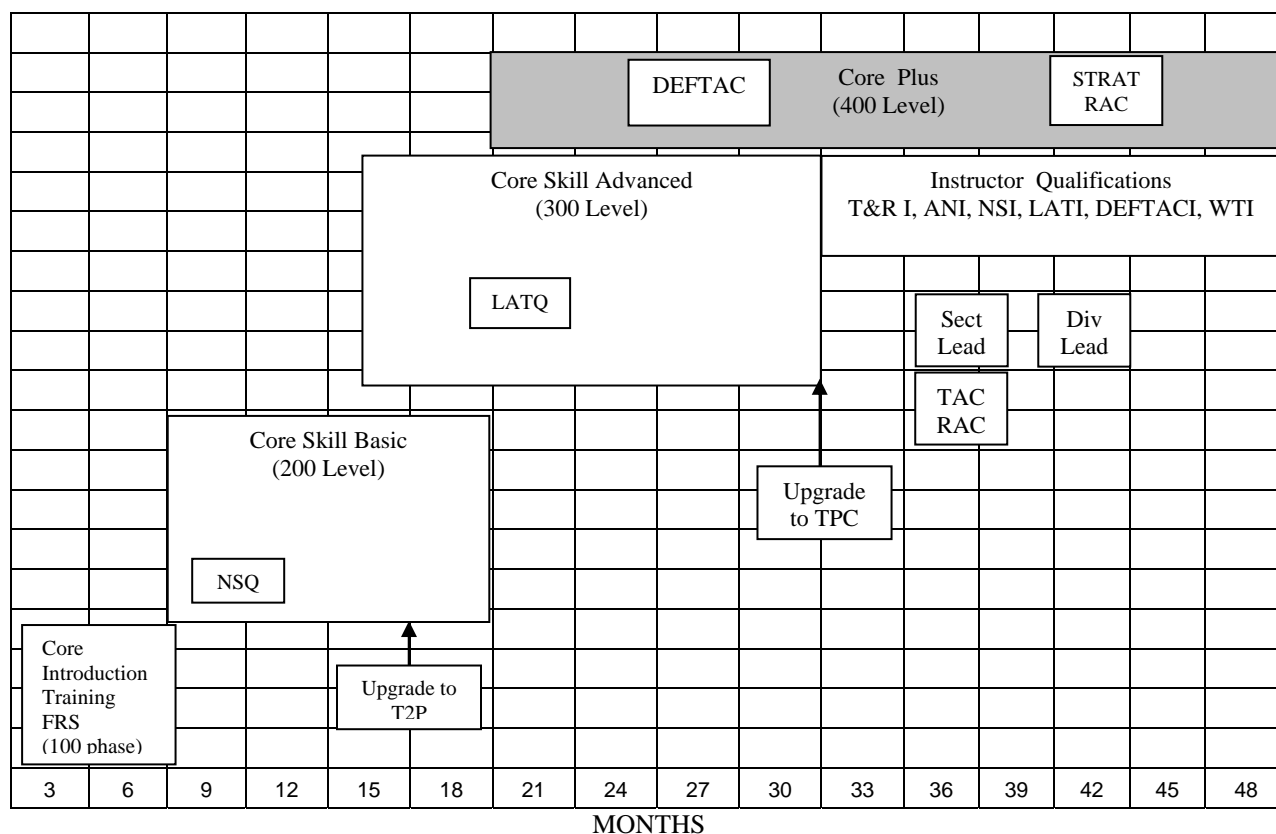
b. Proficiency. Proficiency is a measure of achievement of a specific skill. Re-fly factors establish the maximum time between demonstration of those particular skills. CSP is a measurement of "demonstrated proficiency." If an aircrew exceeds the re-fly factor for a particular event, the individual loses CSP for that particular event. To regain proficiency, an individual shall complete the delinquent event with a proficient crewman. If an entire unit loses proficiency, unit instructors shall regain proficiency by completing an event with instructors from a like unit. If not feasible, the instructor shall regain proficiency by completing the event with another instructor. If a unit has only one instructor and cannot complete the event with an instructor from another unit, he shall regain proficiency with another aircraft commander or as designated by his commanding officer.

c. Qualification. A qualification is a status assigned to personnel based on demonstration of proficiency in a specific skill. Specific criteria to achieve qualifications shall be delineated in individual T&R chapters. Upon successful completion of qualification criteria, commanding officers shall issue an appropriate qualification letter for inclusion in the NATOPS jacket and APR/MPR. Aircrew do not lose a qualification as a function of re-fly factor for individual events. Loss of proficiency (delinquent re-fly

factor) for all associated qualification core skill events constitutes loss of that qualification. Re-qualification requires demonstration of proficiency. Specific re-qualification criteria shall be delineated in individual T&R chapters.

d. Designation. A designation is a status assigned to an individual based on leadership ability. A designation is a command specific, one-time occurrence and remains in effect until removed for cause. Specific designation requirements shall be delineated in individual T&R chapters. Commanders shall issue a designation letter to the individual upon the occasion of original designation, with appropriate copies for inclusion in the NATOPS jacket and APR.

11. KC-130FRT Pilot Progression Model. The training progression model below provides recommended core skill, qualification, and designation attainment timelines for the average pilot.



101. PROGRAM OF INSTRUCTION (POI) FOR BASIC, TRANSITION, AND CONVERSION PILOT

	WEEKS	COURSE	PERFORMING ACTIVITY
Track 1	1-7	USAF C-130 Copilot Initial Qualification (CIQ)	314 th AW/VMGRT-253
	8-28	Core Skill Introduction Training	VMGRT-253
Track 2	1-4	USAF C-130 CIQ Alternative Course	VMGRT-253
	5-25	Core Skill Introduction Training	VMGRT-253
	25/29-81	Core Basic Training	Tactical Squadron
	82-136	Core Advanced Training	Tactical Squadron
	137-208	Core Plus Training	Tactical Squadron

102. POI FOR SERIES CONVERSION PILOT

WEEKS	COURSE	PERFORMING ACTIVITY
1-8	Core Skill Introduction Training	FRS/Tactical Squadron
9-26	Core Basic Training	Tactical Squadron
27-39	Core Advanced Training	Tactical Squadron
40-52	Core Plus Training	Tactical Squadron

103. POI FOR REFRESHER PILOT

WEEKS	COURSE	PERFORMING ACTIVITY
1-4	Core Introduction	FRS/Tactical Squadron
5-26	Core Basic Training	Tactical Squadron
27-39	Core Advanced Training	Tactical Squadron
40-52	Core Plus Training	Tactical Squadron

104. POI FOR SQUADRON INSTRUCTOR PILOTS

WEEKS	COURSE	PERFORMING ACTIVITY
1	Familiarization/Instrument	VMGRT-253/Tactical Squadron
1	Air Refueling Instructor	VMGRT-253
1	Low Level Navigation Instructor	VMGRT-253
1	Formation Instructor	VMGRT-253
1	Air Delivery Instructor	VMGRT-253
1	Assault Landing Zone Instructor	VMGRT-253
1	T&R Instructor	Tactical Squadron
1	NATOPS Instructor	Tactical Squadron
2	Low Altitude Tactics Instructor	MAWTS-1/Tactical Squadron
1	Defensive Tactics Instructor	MAWTS-1
2	Night Systems Instructor	MAWTS-1
7	Weapons and Tactics Instructor	MAWTS-1

110. GROUND TRAINING COURSES OF INSTRUCTION

1. Ground training shall be conducted for each syllabus level.
2. Squadron level ground training required to complete the syllabus is listed in each syllabus level.
3. The following external ground training courses of instruction are required to complete the syllabus.

<u>COURSE</u>	<u>ACTIVITY</u>
Survival, Evasion, Resistance, and Escape (SERE) Course	NAS Brunswick ME, or NAS North Island CA
NITE lab	VMGRT-253 or Tactical Squadron

4. The following external training courses are recommended to complete the syllabus:

<u>COURSE</u>	<u>ACTIVITY</u>
Advanced Airlift Tactics Training Course	AATTC, St. Joseph, MO
Environmental Survival Courses	Regional/Seasonal Survival Schools

111. AIRCREW TRAINING REFERENCES. The following references shall be utilized to ensure safe and standardized training procedures, grading criteria, and aircraft operation:

NATOPS General Flight and Operating Instructions (OPNAVINST 3710.7_)
 NATOPS Flight Manuals (NFM)
 NATOPS Instrument Flight Manual (NIFM)
 NATOPS Air-to-Air Refueling Manual (AAR Manual)
 KC-130 Tactical Manual (TACMAN)/KC-130 NTTP 3.22-1/3.22-3
 KC-130 Tactical Pocket Guide (TPG)
 T&R Program Manual
 MAWTS-1 Course Catalog
 Allied Tactical Publication - 56 (ATP-56) Air to Air Refueling
 Flight Clearance (FC) - issued by NAVAIR
 AFTTP 3-1 Threat Reference Guide
 DOD Flight Information Publications (FLIPs)

120. BASIC PILOT TRAINING SUMMARY

120.1. Core Skill Introduction Training

CORE SKILL INTRODUCTION TRAINING By Stage	Events	Hours	CRP
Basic Qualification	CNATRA Training		25.0
Simulator Training	16	62.0	9.0
Familiarization/Instruments	10	30.0	11.0
Air-to-Air Refueling	3	9.0	4.0
Tactical Navigation	1	2.0	2.0
Formation	2	4.0	3.0
LRNAV	2	16.0	2.0
T3P Check	1	3.0	4.0
TOTALS (Less CNATRA Training)	35	126	35

120.2. Core Skill Basic Training

CORE SKILL BASIC TRAINING By Stage	Events	Hours	CRP
Familiarization (FAM)	3	7.0	1.5
Night Systems (NS)	3	7.0	1.5
Aerial Refueling (AR)	4	16.0	2.5
Tactical Navigation (TACNAV)	5	10.0	3.0
Formation (FORM)	3	6.0	1.5
Air Delivery (AD)	3	4.0	1.5
Long Range Navigation (LRNAV)	1	8.0	.5
IR Threat Reaction (THRX(I))	2	4.0	1.0
Assault Landing Zone (ALZ)	3	9.0	1.5
Rapid Ground Refueling (RGR)	1	0.0	.5
TOTALS	28	71	15

120.3. Core Skill Advanced Training

CORE SKILL ADVANCED TRAINING By Stage	Events	Hours	CRP
Familiarization (FAM)	3	7.0	1.5
Night Systems (NS)	1	2.0	1.0
Aerial Refueling (AR)	3	9.0	3.0
Tactical Navigation (TACNAV)	5	10.0	4.5
Formation (FORM)	4	9.0	4.0
Air Delivery (AD)	2	4.0	1.5
Radar Threat Reaction (THRX(R))	2	5.0	1.5
Assault Landing Zone (ALZ)	3	6.0	3.0
TOTALS	23	52	20

120.4. Core Plus Training

CORE PLUS TRAINING By Stage	Events	Hours	CRP
Air Refueling (AR)	2	9.0	1.0
Tactical Navigation (TACNAV)	4	8.0	1.5
Formation (FORM)	1	2.0	.5
Aerial Delivery (AD)	3	6.0	.7
Defensive Tactics (DEFTAC)	3	6.0	.5
Assault Landing Zone (ALZ)	2	4.0	.8
TOTALS	15	35	5

121. SERIES CONVERSION PILOT TRAINING SUMMARY121.1. Core Skill Introduction Training

CORE SKILL INTRODUCTION TRAINING By Stage	Events	Hours	
Simulator Training	16	62.0	
Familiarization/Instruments	6	18.0	
Air-to-Air Refueling	3	9.0	
Tactical Navigation	1	2.0	
Formation	2	4.0	
LRNAV	2	16.0	
T3P Check	1	3.0	
TOTALS (Less CNATRA Training)	31	114.0	

121.2. Core Skill Basic Training

CORE SKILL BASIC TRAINING By Stage	Events	Hours	CRP
Familiarization (FAM)	3	7.0	
Night Systems (NS)	3	7.0	
Aerial Refueling (AR)	2	8.0	
Tactical Navigation (TACNAV)	3	6.0	
Formation (FORM)	1	2.0	
Air Delivery (AD)	1	2.0	
Long Range Navigation (LRNAV)	1	8.0	
IR Threat Reaction (THRX(I))	2	4.0	
Assault Landing Zone (ALZ)	3	9.0	
Rapid Ground Refueling (RGR)	1	0.0	
TOTALS	20	53.0	

121.3. Core Skill Advanced Training

CORE SKILL ADVANCED TRAINING By Stage	Events	Hours	CRP
Familiarization (FAM)	3	7.0	
Night Systems (NS)	1	2.0	
Aerial Refueling (AR)	1	3.0	
Tactical Navigation (TACNAV)	5	10.0	
Formation (FORM)	1	2.0	
Air Delivery (AD)	2	4.0	
Radar Threat Reaction (THRX(R))	2	5.0	
Assault Landing Zone (ALZ)	3	6.0	
TOTALS	18	39.0	

121.4. Core Plus Training

CORE PLUS TRAINING By Stage	Events	Hours	CRP
Air Refueling (AR)	2	9.0	
Tactical Navigation (TACNAV)	1	2.0	
Formation (FORM)	1	2.0	
Aerial Delivery (AD)	1	2.0	
Defensive Tactics (DEFTAC)	1	2.0	
Assault Landing Zone (ALZ)	1	2.0	
TOTALS	7	19.0	

122. REFRESHER PILOT TRAINING SUMMARY122.1. Core Skill Introduction Training

CORE SKILL INTRODUCTION TRAINING By Stage	Events	Hours	CRP
Simulator Training	3	12.0	
Familiarization/Instruments	5	15.0	
TOTALS	8	27.0	

122.2. Core Skill Basic Training

CORE SKILL BASIC TRAINING By Stage	Events	Hours	CRP
Familiarization (FAM)	1	2.0	
Night Systems (NS)	1	2.0	
IR Threat Reaction (THRX(I))	1	2.0	
Rapid Ground Refueling (RGR)	1	0.0	
TOTALS	4	6.0	

122.3. Core Skill Advanced Training

CORE SKILL ADVANCED TRAINING By Stage	Events	Hours	CRP
Familiarization (FAM)	2	4.0	
Aerial Refueling (AR)	2	6.0	
Tactical Navigation (TACNAV)	2	4.0	
Formation (FORM)	1	2.0	
Air Delivery (AD)	1	2.0	
Radar Threat Reaction (THRX(R))	1	2.0	
Assault Landing Zone (ALZ)	1	2.0	
TOTALS	10	22.0	

122.4. Core Plus Training

CORE PLUS TRAINING By Stage	Events	Hours	CRP
Air Refueling (AR)	2	9.0	
Tactical Navigation (TACNAV)	1	2.0	
Aerial Delivery (AD)	1	2.0	
Defensive Tactics (DEFTAC)	1	2.0	
Assault Landing Zone (ALZ)	1	2.0	
TOTALS	6	17.0	

125. GRADUATE LEVEL COURSES. There are 4 graduate level courses (LATI, DEFTACI, NSI, WTI) that qualify instructors for specific portions of the T&R syllabus. The requirements for these instructor certifications are contained in the MAWTS-1 Course Catalog. Squadron T&R Instructors shall complete the required syllabus and be designated by commanding officers to instruct specific T&R events as delineated in the individual event descriptions. Stage Instructors are utilized primarily by the FRS and will be designated by commanding officers to instruct in specific T&R mission stages, such as LRNAV, FORM, TACNAV, AR, ALZ and AD.

130. EVENT PERFORMANCE REQUIREMENTS1. General

a. The time required to train a KC-130 pilot to completion of the Core Plus phase will vary depending on previous pilot experience. Basic, Transition, and Conversion pilots shall fly the entire syllabus. Series Conversion pilots should fly events coded with an SC. Refresher pilots represent a varying background and should fly flights coded with an R. **When a crewmember completes a stage of training, that crewmember need only maintain proficiency in the R coded events for that stage to remain**

proficient. Commanding officers will review the qualifications, previous experience, currency, and demonstrated ability of Refresher pilots with a view towards waiving and/or combining required flights.

b. Once a pilot has completed the Core Skill Introduction series and maintains currency in type and model, there is no requirement to refly Core Skill Introduction flights.

c. All simulator training codes should be flown prior to the first flight in the aircraft for that stage/phase. Approved IFARS simulators are contained in OPNAVINST 3710.7. If an approved simulator is not available, unapproved simulators may be used for simulator training at the discretion of the squadron commander. Unapproved simulator time may not be usable for annual flight time minima.

d. All flights annotated with an E shall be evaluated per the Aviation T&R Program Manual.

e. Minimum required Refresher flights are indicated with an R. Additional guidance concerning Refresher pilots is contained in the Aviation T&R Program Manual.

f. Flights annotated with an N shall be flown at night without NVDs. Flights annotated with an (N) may be flown at night without NVDs. Flights annotated with an NS shall be flown at night utilizing NVDs. Flights annotated with an (NS) may be flown at night utilizing NVDs.

g. The intent of NS events is to conduct the events with use of NVDs. This should not restrict aircrews from executing events between sunset and end of nautical twilight or beginning of nautical twilight and sunrise when NVDs are less effective. Use of NVDs during these periods shall be at the discretion of the aircraft commander with safety and the NS intent in mind.

h. For NS operations, the fixed-wing minimum altitudes delineated in the Aviation T&R Program Manual shall be adhered to in all phases of flight except for TLZ operations and airdrops from IP inbound, at which point a descent to airdrop altitude or final approach procedure may be conducted. Minimum altitudes for Aerial Delivery shall be as per NWP 3-22.5-KC-130, Vol. 1, Chapter 6 and Appendix H.

i. Non-LAT qualified pilots conducting LAT training in the left or right seat shall be instructed by a proficient LATI occupying the other pilot seat. Pilots who lose proficiency in LAT lose their LAT qualification.

j. Non-DEFTAC qualified pilots who are conducting DEFTAC training shall be instructed by a DEFTACI occupying the other pilot seat.

k. The following terms shall be used in the event descriptions to identify instructor and student responsibilities and standardize instruction:

(1) Discuss. Discuss denotes that the instructor will quiz the aircrew under instruction on the applicable procedures, systems, or maneuvers. The aircrew under instruction is responsible for knowledge of the procedures prior to the event brief.

(2) Demonstrate. Demonstrate denotes that the instructor should perform the maneuver with precision and an accompanying description. The aircrew under instruction is responsible for knowledge of the procedures prior to the event brief and should observe the demonstration of the

maneuver. The aircrew under instruction may perform the maneuver/procedure with coaching from the instructor.

(3) Introduce. Introduce denotes that the instructor should coach the aircrew under instruction through the maneuver as necessary. The aircrew under instruction is responsible for knowledge of the procedures prior to the event brief and should perform the maneuver with coaching as necessary. The instructor may demonstrate the maneuver if necessary.

(4) Practice. Practice denotes that the instructor observes the aircrew under instruction performing the maneuver. The aircrew should perform the maneuver/procedure with minimal coaching.

131. CORE SKILL INTRODUCTION TRAINING

1. General

a. Upon completion of this phase of training, the pilot will be a NATOPS qualified Transport Third Pilot. The pilot will be capable of basic aircraft copilot duties from the right seat to include instrument flight, normal and emergency procedures, CRM, and mission planning.

b. Basic, Transition (T), and T3P Series Conversion (SC) pilots shall be trained and evaluated in the right seat. TPC/T2P pilots in the R or SC syllabus should be trained and evaluated in the left seat.

c. All events in the Core Skill Introduction phase shall be instructed/evaluated by an appropriate FRS instructor via appropriate aircrew training form.

d. All simulator events shall be flown with an appropriate FRS instructor or an appropriately qualified Contract Simulator Instructor (CSI).

e. Approved IFARS simulators are contained in OPNAVINST 3710.7. If an approved simulator is not available, unapproved simulators may be used for simulator training at the discretion of the squadron commander. Unapproved simulator time may not be usable for annual flight time minima. If an approved simulator is unavailable, the simulator events for pilots in Training Track 1 may be waived by the commanding officer. However, simulator events for pilots in Training Track 2 may not be waived.

f. Once a pilot has completed the Core Skill Introduction series and maintains currency in type and model, there is no requirement to re-fly Core Skill Introduction flights.

g. Instructors shall be responsible for mission briefs. Students may conduct a mission briefs, but only after observing the instructor brief a mission in that specific phase.

2. Familiarization/Instruments

a. Purpose. Introduce pilots to fundamental KC-130 NATOPS, instrument, and CRM procedures.

b. General

(1) Basic, Transition, Conversion, and Refresher third pilots (T3P) shall be trained and evaluated in the right seat. TPC and T2P refresher pilots should be trained and evaluated in the left seat. A minimum of two (N) coded flights shall be flown at night.

(2) Basic, Transition, and Conversion pilots should complete the USAF C-130 CIQ course prior to this stage.

c. Crew Requirements. Two pilots are required for simulator events. The minimum crew as defined by the NFM or NTP is required for flight events.

d. Ground/Academic Training

(1) Prior to FAM-100, all Basic, Transition and Series Conversion pilots will complete a familiarization training evolution to include cockpit management, aircraft preflight and post flight, TFOA inspections, emergency evacuation, and use and donning of all emergency equipment to include bailout training.

(2) Core skill Introduction Syllabus Overview.

(3) NATOPS Flight Manual overview.

(4) VMGR Squadron Mission Statement and METLs.

(5) Six Functions of Marine Aviation and VMGR Mission.

(6) KC-130 Capabilities Review.

(7) NATOPS Briefing Techniques.

(8) NITE Lab is optional for Core Skill Introduction but should be completed at the earliest possible time as it is required to begin the NS stage of Core Basic Training.

e. Flight and Simulator Event Training (24 Events, 86.0 Hours)

<u>SFAM-001</u>	<u>4.0</u>	<u>CPT/OFT/WST S</u>
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Goal. Introduce expanded checklists up to and including engine run-up, CRM, aircraft limitations, and performance computations.

Requirement. CSI shall introduce expanded cockpit checklists up to and including the run-up checklist. The pilot under instruction (pilot) shall practice the expanded cockpit checklists up to and including the run-up checklist.

Performance Standard. Per the NFM and Pilot 100 Syllabus Student Guide. The pilot shall be able to recall aircraft limitations with associated checklists.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. CSI.

<u>SFAM-002</u>	<u>4.0</u>	<u>CPT/OFT/WST S</u>
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Goal. Introduce expanded checklists from before take-off to secure; introduce take-off, descent, and approach brief.

Requirement. CSI shall introduce expanded cockpit checklists from before take-off to secure. The pilot shall practice the expanded cockpit checklists up to and including the secure

checklist. The pilot shall practice previously introduced checklists.

Performance Standard. Per the NFM and Pilot 100 Syllabus Student Guide. Pilot shall be able to recall aircraft limitations.

Prerequisite. SFAM-001.

Ordinance. N/A

External Syllabus Support. CSI.

SFAM-003

4.0 CPT/OFT/WST S

Goal. Train the pilot in normal procedures and system malfunctions. Introduce start malfunctions.

Requirement. CSI shall introduce start malfunctions. The pilot shall practice normal checklists and aircraft limitations associated with the checklists. The pilot should compute Take-off and Landing Data (TOLD) card.

Performance Standard. Per the NFM and Pilot 100 Syllabus Student Guide. The pilot shall diagnose and handle all start malfunctions per NFM.

Prerequisite. SFAM-002.

Ordinance. N/A

External Syllabus Support. CSI.

SFAM-004

4.0 CPT/OFT/WST S

Goal. Train the pilot in normal procedures, system malfunctions, and ground emergency procedures.

Requirement. CSI shall introduce ground emergencies. The pilot shall practice normal checklists and start malfunctions. The pilot should compute TOLD card.

Performance Standard. Per the NFM and Pilot 100 Syllabus Student Guide. Pilot shall diagnose and handle all ground emergencies per NFM.

Prerequisite. SFAM-003.

Ordinance. N/A

External Syllabus Support. CSI.

SFAM-005

4.0 SC,R CPT/OFT/WST S

Goal. Cockpit procedures stage progress review. Review normal checklists and start malfunctions. Practice ground emergencies.

Requirement. CSI and pilot shall review normal checklists and start malfunctions. The pilot shall practice ground emergencies and compute Landing data.

Performance Standard. Per the NFM and Pilot 100 Syllabus Student Guide.

Prerequisite. SFAM-004.

Ordinance. N/A

External Syllabus Support. CSI.

SFAM-006

4.0 OFT/WST S/A

Goal. Train the pilot in normal procedures, propeller system malfunctions, and emergency procedures.

Requirement. CSI shall introduce VFR departure and climb, basic airwork, VFR approach, landings, and abort procedures. The pilot shall practice VFR approach and landings with coaching from the CSI as necessary. The pilot should compute TOLD card.

Performance Standard. Per the NFM and Pilot 100 Syllabus Student Guide. Pilot shall diagnose and handle all aborts and propeller malfunctions per NFM.

Prerequisite. SFAM-005.

Ordinance. N/A

External Syllabus Support. CSI.

SFAM-007

4.0 SC OFT/WST S/A

Goal. Train the pilot in normal procedures, system malfunctions, and emergency procedures. Introduce steep turns and approach to stalls.

Requirement. CSI shall introduce steep turns, approach to stalls, and engine systems failures. The pilot shall practice steep turns and approach to stalls. The pilot should compute 3 engine go-around capabilities.

Performance Standard. Per the NFM and Pilot 100 Syllabus Student Guide. The pilot shall diagnose and handle all engine systems malfunctions per NFM.

Prerequisite. SFAM-006.

Ordinance. N/A

External Syllabus Support. CSI.

SINST-008

4.0 SC OFT/WST S

Goal. Train the pilot in normal procedures, system malfunctions, emergency procedures, and instrument procedures. Introduce flight planning, clearance procedures, radio NAVAID IFF/SIF management, and GCA approaches.

Requirement. CSI shall introduce flight planning, clearance procedures, radio NAVAID IFF/SIF management, and GCA approaches. CSI shall introduce electrical system and

associated malfunctions. The pilot shall practice duties associated with instrument flight procedures. The pilot should compute 3-engine climb performance.

Performance Standard. Per the NFM and Pilot 100 Syllabus Student Guide. The pilot shall diagnose and handle all electrical malfunctions per NFM.

Prerequisite. SFAM-007.

Ordinance. N/A

External Syllabus Support. CSI.

SINST-009

4.0 SC OFT/WST S

Goal. Train the pilot in normal and instrument flight procedures, system malfunctions, and emergency procedures. Introduce ILS procedures.

Requirement. CSI shall introduce ILS procedures, and bleed air and anti-icing system malfunctions.

Performance Standard. Per the NFM and Pilot 100 Syllabus Student Guide. Pilot shall diagnose and handle bleed air and anti-icing emergencies per NFM.

Prerequisite. SINST-008.

Ordinance. N/A

External Syllabus Support. CSI.

SINST-010

4.0 SC OFT/WST S

Goal. Train the pilot in normal and instrument flight procedures, fuel system malfunctions and emergency procedures. Introduce TACAN, VOR, ADF approaches, and holding procedures.

Requirement. CSI shall introduce TACAN, VOR, ADF approaches, and holding procedures. CSI shall introduce fuel system malfunctions. The pilot should compute performance computations per Pilot 100 Syllabus Student Guide.

Performance Standard. Per the NFM and Pilot 100 Syllabus Student Guide. Pilot shall diagnose and handle fuel system malfunctions per NFM.

Prerequisite. SINST-009.

Ordinance. N/A

External Syllabus Support. CSI.

SINST-011

4.0 SC OFT/WST S

Goal. Train the pilot in normal procedures, system malfunctions, emergency procedures, and instrument procedures to include circling and penetration/high approaches.

Requirement. CSI shall introduce circling approaches, and

penetrations/high approaches. CSI shall introduce hydraulic malfunctions, trim, flaps, and landing gear failures. The pilot shall practice circling approaches and penetration/high approaches. The pilot should compute driftdown performance per Pilot 100 Syllabus Student Guide.

Performance Standard. Per the NFM and Pilot 100 Syllabus Student Guide. The pilot shall diagnose and handle hydraulic malfunctions and trim, flaps and landing gear failures per NFM.

Prerequisite. SINST-010.

Ordinance. N/A

External Syllabus Support. CSI.

SINST-012

4.0 SC,R OFT/WST S

Goal. Train the pilot in normal procedures, system malfunctions, emergency procedures, and instrument procedures. Introduce engine-out approaches, landings, and missed approach/go-around procedures. Introduce takeoff continued after engine failure.

Requirement. CSI shall introduce engine-out approaches, landings, and missed approach/go-around procedures. CSI shall introduce takeoff continued after engine failure. The pilot should compute certain performance computations per Pilot 100 Syllabus Student Guide.

Performance Standard. Per the NFM and Pilot 100 Syllabus Student Guide. Pilot shall practice takeoff continued after engine failure procedures per NFM.

Prerequisite. SINST-011.

Ordinance. N/A

External Syllabus Support. CSI.

SINST-013

4.0 SC,R OFT/WST S

Goal. Train the pilot in normal procedures, system malfunctions, emergency procedures, and instrument procedures. Introduce two engine approach, landing, and go-around. Introduce partial panel/no gyro approach.

Requirement. CSI shall introduce two engine approach, landing, go-around, and partial panel/no gyro approaches. CSI shall introduce fuel/cargo jettison and NAVAID/radio failure. Pilot shall practice two engine approaches, landings, and go-around with coaching from the CSI as necessary. Pilot should compute descent performance per Pilot 100 Syllabus Student Guide.

Performance Standard. Per the NFM and Pilot 100 Syllabus Student Guide. The pilot shall conduct fuel/cargo jettison procedures and handle NAVAID/radio failure per NFM.

Prerequisite. SINST-012.

Ordinance. N/A

External Syllabus Support. CSI.

SINST-014

4.0 SC,R OFT/WST S

Goal. Simulator stage progress review. Review all previously introduced procedures and system malfunctions.

Requirement. CSI and Pilot shall review all previously introduced procedures and system malfunctions. The pilot should compute critical field length per Pilot 100 Syllabus Student Guide.

Performance Standard. Per the NFM and Pilot 100 Syllabus Student Guide. Pilot shall practice all procedures and handle all emergencies per NFM.

Prerequisite. SINST-013.

Ordinance. N/A

External Syllabus Support. CSI.

FAM-100

3.0 1 KC-130 A

Goal. Train the pilot in normal flight procedures. Introduce preflight, taxi, take-off, VFR departure, aerodynamic performance, stability and control, approach to stalls, VFR approach, VFR break, 100 percent and 50 percent flap landings.

Requirement. Instructor shall introduce preflight, taxi, take-off, VFR departure, aerodynamic performance, stability and control, approach to stalls, VFR approach, VFR break, 100 percent and 50 percent flap landings. Instructor should introduce start malfunctions. The pilot should compute VMC, take-off speed, refusal speed, stall speed, climb, approach, threshold, and touchdown speed.

Performance Standard. Per the NFM and Pilot 100 Syllabus Student Guide. Pilot should diagnose and handle all start malfunctions per NFM.

Prerequisite. SINST-014.

Ordinance. N/A

External Syllabus Support. N/A

INST-101

3.0 SC,R 1 KC-130 A

Goal. Train the pilot in normal and instrument flight procedures. Introduce instrument departure, basic instrument maneuvers to include timed turns, climbs, and descents, GCA procedures, and oil system malfunctions.

Requirement. Instructor shall introduce instrument departure, basic instrument maneuvers to include timed turns, climbs, and descents, GCA procedures, and oil system malfunctions. Instructor shall introduce NAVAID configuration and NAV MODE selector operation. The pilot shall practice 100 percent and

50 percent flap landings. The pilot should compute VMC, takeoff speed, refusal speed, specific range, approach, threshold, and touchdown speed. Refreshers should complete this flight concurrently with FAM-100.

Performance Standard. Per the NFM, IFM, and Pilot 100 Syllabus Student Guide. The pilot shall diagnose and handle all oil system malfunctions per NFM.

Prerequisite. FAM-100.

Ordinance. N/A

External Syllabus Support. N/A

INST-102

3.0 1 KC-130 A (N)

Goal. Train the pilot in normal procedures, instrument flight procedures to include ILS and Localizer approach procedures, bleed air system malfunctions, and ground emergency procedures.

Requirement. Instructor shall introduce ILS/Localizer procedures, the bleed air system, and ground emergencies. The pilot shall practice 100 percent and 50 percent flap landings. The pilot should compute VMC, takeoff speed, refusal speed, driftdown (3 engines, maximum continuous power, flaps and gear up), approach speed, threshold speed, and touchdown speed.

Performance Standard. Per the NFM, IFM, and Pilot 100 Syllabus Student Guide. Pilot shall demonstrate an operational knowledge of the bleed air system. The pilot shall diagnose and handle ground emergencies per NFM.

Prerequisite. INST-101.

Ordinance. N/A

External Syllabus Support. N/A

INST-103

3.0 SC,R 1 KC-130 A (N)

Goal. Train the pilot in normal procedures, instrument flight procedures to include TACAN, VOR, and ADF approach procedures, system malfunctions, and emergency procedures.

Requirement. Instructor shall introduce TACAN, VOR, and ADF approaches. Instructor shall introduce hydraulics system. The pilot should practice TACAN, VOR, and ADF approaches to 100 percent and 50 percent flap landings. The pilot should compute VMC, takeoff speed, refusal speed, service ceiling (3 engines with pods), approach speed, threshold speed, and touchdown speed. Refreshers should complete this flight concurrently with INST-102.

Performance Standard. Per the NFM, IFM, and Pilot 100 Syllabus Student Guide. Pilot shall demonstrate an operational knowledge of the hydraulics system.

Prerequisite. INST-102.

Ordinance. N/A

External Syllabus Support. N/A

INST-104

3.0 1 KC-130 A (N)

Goal. Train the pilot in normal procedures, instrument flight procedures to include holding, circling approaches and penetrations/high approaches, system malfunctions, abort procedures, and in-flight emergency procedures.

Requirement. Instructor shall introduce abort procedures. Instructor shall introduce holding, circling approaches, penetrations/high approaches, and in-flight emergencies. Pilot should practice circling approaches, penetration/high approaches to 100 percent and 50 percent flap landings. The pilot should compute VMC, takeoff speed, refusal speed, maximum endurance (4 engines, normal bleed), approach speed, threshold speed, and touchdown speed.

Performance Standard. Per the NFM, IFM, and Pilot 100 Syllabus Student Guide. Pilot shall diagnose and handle aborts and in-flight emergencies per NFM.

Prerequisite. INST-103.

Ordinance. N/A

External Syllabus Support. N/A

INST-105

3.0 SC,R 1 KC-130 A

Goal. Train the pilot in normal procedures, instrument flight procedures, system malfunctions, in-flight emergency procedures to include engine-out operations.

Requirement. Instructor shall introduce propeller and engine malfunctions. Instructor shall introduce engine-out operations, 3 engine precision approaches, landings, missed approaches and go-arounds. Flight will be conducted in day VMC conditions. Pilot should compute VMC, takeoff speed, refusal speed, cruise ceiling (3 engines with pods), approach, threshold, and touchdown speeds. Refreshers should complete this flight concurrently with INST-104. Refreshers do not have the day VMC restriction.

Performance Standard. Per the NFM, IFM, and Pilot 100 Syllabus Student Guide. Pilot shall diagnose and handle propeller and engine malfunctions per NFM.

Prerequisite. INST-104.

Ordinance. N/A

External Syllabus Support. N/A

INST-106

3.0 1 KC-130 A

Goal. Train the pilot in normal procedures, instrument flight procedures, electrical system malfunctions, and in-flight

emergency procedures to include 3 engine non-precision approaches, missed approaches and go-arounds.

Requirement. Instructor shall introduce 3 engine non-precision approaches, missed approaches and go-arounds. Instructor shall introduce the electrical system and nacelle overheat warning. Pilot should practice aborts and engine out non-precision approaches and landings. Flight will be conducted in daylight VFR conditions. Pilot should compute VMC, takeoff speed, refusal speed, specific range (3 engines, 20,000 feet), 3 engine approach, threshold, and touchdown speeds.

Performance Standard. Per the NFM, IFM, and Pilot 100 Syllabus Student Guide. Pilot shall demonstrate an operational knowledge of the electrical system and procedures for nacelle overheat warning.

Prerequisite. INST-105.

Ordinance. N/A

External Syllabus Support. N/A

INST-107

3.0 SC,R 1 KC-130 A

Goal. Train the pilot in normal procedures, instrument flight procedures, fuel and oxygen system malfunctions, and in-flight emergency procedures to include fuselage fire and smoke and fume elimination. Introduce take-off continued after engine failure and demonstrate 2 engine approach.

Requirement. Instructor shall introduce 3 engine circling approach and take-off continued after engine failure. Instructor shall introduce fuel and oxygen systems and associated malfunctions. Instructor shall demonstrate 2 engine and no-flap approaches and landings. Flight will be conducted in daylight VFR conditions. Pilot should compute 2 Engine VMC (air), takeoff speed, refusal speed, 2 engine downwind, base, approach, threshold, and touchdown speeds. Refreshers should complete this flight concurrently with INST-106 and do not have the day VMC restriction.

Performance Standard. Per the NFM, IFM, and Pilot 100 Syllabus Student Guide. Pilot shall demonstrate an operational knowledge of the fuel and oxygen systems and associated malfunctions.

Prerequisite. INST-106.

Ordinance. N/A

External Syllabus Support. N/A

INST-108

3.0 1 KC-130 A (N)

Goal. Train the pilot in normal procedures, instrument flight procedures to include partial-panel/no gyro approaches. Introduce Gas Turbine Compressor and Air Turbine Motor systems. Introduce pressurization, air conditioning, and

anti-icing/de-icing system malfunctions, and in-flight emergency procedures.

Requirement. Instructor shall introduce partial panel/no-gyro approaches. Instructor shall introduce GTC and ATM systems. Instructor shall introduce pressurization, air conditioning, and anti-icing/de-icing systems and associated malfunctions. Pilot should practice all previously introduced procedures. Pilot should compute TOLD card.

Performance Standard. Per the NFM, IFM, and Pilot 100 Syllabus Student Guide. Pilot shall diagnose and handle all system malfunctions per NFM.

Prerequisite. INST-107.

Ordinance. N/A

External Syllabus Support. N/A

INST-109

3.0 SC,R 1 KC-130 A (N)

Goal. Familiarization/Instrument stage progress review. Review NATOPS normal, emergency, and instrument flight procedures.

Requirement. Instructor and pilot shall review NATOPS normal, emergency, and instrument flight procedures. The pilot shall perform all maneuvers required for a standard instrument rating. The pilot should compute TOLD card. Refreshers should complete this flight concurrently with INST-108.

Performance Standard. Per the NFM, IFM, Pilot 100 Syllabus Student Guide, and OPNAVINST 3710.7__.

Prerequisite. INST-108.

Ordinance. N/A

External Syllabus Support. N/A

3. Air Refueling

a. Purpose. To introduce pilots to basic air refueling procedures.

b. Crew Requirements. Two pilots are required for simulator events. The minimum crew as defined by the NFM or NTPP is required for flight events to include 1 observer per operated aerial refueling pod.

c. Ground/Academic Training

(1) Air Refueling Procedures Lecture.

(2) Introduction to Air Refueling.

(3) In-flight Refueling System.

(4) Air Refueling Procedures.

(5) Voice Procedures.

(6) Tactical Briefing Guide.

d. Flight and Simulator Event Training (4 Events, 13.0 Hours)SAR-0154.0SC OFT/WST S

Goal. Train the pilot in fixed-wing and rotary-wing air refueling procedures.

Requirement. CSI shall introduce radio procedures, tanker/receiver management, rotary-wing rendezvous procedures and emergency procedures related to AAR. The pilot should be exposed to duties in both the left and right seats during simulated AAR operations. The pilot should compute fuel calculations per Pilot 100 Syllabus Student Guide.

Performance Standard. Per the NFM, KC-130 TACMAN/NTTP, NATOPS AAR Manual, and Pilot 100 Syllabus Student Guide.

Prerequisite. SINST-014.

Ordinance. N/A

External Syllabus Support. CSI.

AR-1103.0SC 1 KC-130 A

Goal. Train the pilot in fixed-wing AAR procedures. Introduce radio procedures, tanker/receiver management, and emergency procedures related to AAR.

Requirement. Instructor shall introduce radio procedures, tanker/receiver management, and emergency procedures related to fixed-wing AAR. Instructor shall introduce pilot responsibilities during air refueling. Instructor shall introduce emergencies associated AAR to include hose jettison, landing with hose extended, and breakaway procedures. Pilot should compute air refueling performance calculations per Pilot 100 Syllabus Student Guide.

Performance Standard. Per the NFM, KC-130 TACMAN/NTTP, the NATOPS AAR Manual, and Pilot 100 Syllabus Student Guide.

Prerequisite. INST-105, SAR-015.

Ordinance. N/A

External Syllabus Support. Fixed-wing receivers, Special Use Airspace.

AR-1113.0SC 1 KC-130 A

Goal. Train the pilot in rotary-wing AAR procedures. Introduce rendezvous procedures, rotary-wing refueling procedures, and emergency procedures related to rotary-wing air refueling.

Requirement. Instructor shall introduce rendezvous procedures, rotary-wing refueling procedures, and emergency procedures related to rotary-wing air refueling. Pilot should compute air refueling performance calculations per Pilot 100

Syllabus Student Guide. Flight will be conducted in day VMC conditions. Two (2) rendezvous' are required for completion.

Performance Standard. Per the NFM, KC-130 TACMAN/NTTP, the NATOPS AAR Manual, and Pilot 100 Syllabus Student Guide.

Prerequisite. INST-105, SAR-015.

Ordinance. N/A

External Syllabus Support. Rotary-wing receivers, Special Use Airspace.

AR-112

3.0

SC 1 KC-130 A (N)

Goal. AAR stage progress review.

Requirement. Pilot shall perform radio procedures, tanker/receiver management, and emergency procedures related to aerial refueling. Sortie may be fixed-wing or rotary-wing air refueling. Pilot should compute air refueling performance calculations per Pilot 100 Syllabus Student Guide.

Performance Standard. Per the NFM, KC-130 TACMAN/NTTP, the Air Refueling Manual, and Pilot 100 Syllabus Student Guide.

Prerequisite. AR-110, AR-111.

Ordinance. N/A

External Syllabus Support. Fixed or rotary-wing receivers, Special Use Airspace.

4. Tactical Navigation

a. Purpose. To introduce pilots to low level navigation and air delivery operations.

b. Crew Requirements. The minimum crew as defined by the NFM or NTTP is required for flight events.

c. Ground/Academic Training

(1) Military Interpretation of Terrain.

(2) Chart Preparation.

(3) Low Level Flight Planning.

(4) Low Level Procedures and Navigation Techniques.

(5) Basic Cargo Air Delivery Procedures.

(6) Basic Troop Air Delivery Procedures.

d. Flight and Simulator Event Training (1 Flight, 3.0 Hours)

TACNAV-120

2.0

SC 1 KC-130 A

Goal. Introduce the pilot to low-level navigation to a simulated air delivery.

Requirement. Instructor shall introduce procedures, limitations, and hazards associated with low-level flight. Instructor shall introduce AD procedures from LL ingress utilizing a modified slowdown profile. Pilot will plan and navigate a low level route of at least 6 checkpoints. Minimum altitude per T&R Program Manual.

Performance Standard. Per the NFM, KC-130 TACMAN/NTTP, and Pilot 100 Syllabus Student Guide. Arrive at the target within 90 seconds.

Prerequisite. INST-105.

Ordinance. N/A

External Syllabus Support. Military training route.

5. Formation

- a. Purpose. Introduce pilots to basic section formation procedures.
- b. Crew Requirements. The minimum crew as defined by the NFM or NTTP is required for flight events.
- c. Ground/Academic Training. Formation techniques and procedures.
- d. Flight and Simulator Event Training (2 Flights, 4.0 Hours)

FORM-130 2.0 2 KC-130 A

Goal. Introduce the pilot to section formation procedures.

Requirement. Instructor shall introduce ground formation procedures, takeoff, climb, and a minimum of 3 join-ups. Instructor shall introduce parade, trail, free cruise positions, and VFR section recovery. Pilot should perform a minimum of 3 join-ups. Pilot should compute VMC, refusal speed, take-off speed, climb speed, approach, threshold, and touchdown speed.

Performance Standard. Per the NFM and KC-130 TACMAN/NTTP, and Pilot 100 Syllabus Student Guide.

Prerequisite. INST-105.

Ordinance. N/A

External Syllabus Support. Special Use Airspace.

FORM-131 2.0 2 KC-130 A

Goal. Formation stage progress review. Introduce low level formation and IFR weather penetration procedures.

Requirement. Instructor shall introduce low level formation positions and IFR weather penetrations procedures. Pilot shall practice ground formation procedures, takeoff, climb, and a minimum of three join-ups. Pilot shall practice parade, trail, and free cruise positions and VFR section recovery. Pilot should compute VMC, refusal speed, take-off speed, climb speed, approach, threshold, and touchdown speed.

Performance Standard. Per the NFM, KC-130 Tactical Manual, and Pilot 100 Syllabus Student Guide.

Prerequisite. FORM-130.

Ordinance. N/A

External Syllabus Support. Special Use Airspace.

6. Post Maintenance Check Flight (PMCF)

- a. Purpose. Familiarize the pilot with PMCF procedures.
- b. Crew Requirement. Two pilots are required for simulator events.
- c. Ground/Academic Training. N/A.
- d. Flight and Simulator Event Training (1 Period, 2.0 Hours)

SPMCF 016 2.0 SC OFT/WST S

Goal. Introduce profile A, B, C, D and E functional checkflight procedures.

Requirement. CSI shall introduce profile A, B, C, D and E functional checkflight procedures. CSI shall introduce crew qualification and weather criteria for functional checkflights. Pilot shall compute VMC, take-off speed, refusal speed, 3 engine climb speed, approach, threshold, and touchdown speeds.

Performance Standard. Per the NFM.

Prerequisite. SINST-014.

Ordinance. N/A

External Syllabus Support. CSI.

7. Long Range Navigation

- a. Purpose. Introduce the pilot to long-range overwater navigation and ICAO procedures.
- b. Crew Requirement. The minimum crew as defined by the NFM is required for flight events.
- c. Ground/Academic Training. ICAO procedures, FLIP APs, and foreign clearance guide familiarization.
- d. Flight and Simulator Event Training (2 Events, 16.0 Hours)

LRNAV-150 8.0 1 KC-130 A (N)

Goal. Introduce the pilot to long-range overwater and ICAO procedures.

Requirement. Instructor shall introduce overwater navigation, CRM, flight publications, fuel management, types of cruise schedules, factors affecting range, and operation in an ICAO

environment. Flight will be conducted in an ICAO environment. Pilot shall compute performance data via cruise summary chart.

Performance Standard. Per the NFM.

Prerequisite. INST-105.

Ordinance. N/A

External Syllabus Support. N/A

LRNAV-151 8.0 1 KC-130 A (N)

Goal. Train the pilot in long range overwater and ICAO procedures.

Requirement. Instructor and pilot shall review overwater navigation, CRM, flight publications, fuel management, types of cruise schedules, factors affecting range, and operation in an ICAO environment. Flight will be conducted in an ICAO environment. Pilot shall compute performance data via cruise summary chart.

Performance Standard. Per the NFM and Pilot 100 Syllabus Student Guide.

Prerequisite. LRNAV-150.

Ordinance. N/A

External Syllabus Support. N/A

8. NATOPS Check

a. Purpose. Conduct a T3P/T2P NATOPS evaluation.

b. General. An annual NATOPS check may be conducted any time after completion of the Core Skill Introduction FAM/INST stage. Commanders shall not designate replacement pilots as a T3P and assign MOS 7556 until satisfactory completion of the entire Core Skill Introduction phase. The provisions of the NFM and OPNAVINST 3710.7 apply.

c. Crew Requirements. The minimum crew as defined by the NFM is required for flight events.

d. Ground/Academic Training. N/A.

e. Flight Training (1 Flight, 3.0 Hours)

CK-190 3.0 SC,R E 1 KC-130 A (N)

Goal. NATOPS evaluation flight.

Requirement. ANI shall conduct NATOPS evaluation flight. Basic, Transition, Series Conversion, and T3P Refresher pilots shall be evaluated in the right seat. TPC and T2P Refresher pilots should be evaluated in the left seat. Pilot should compute TOLD card.

Performance Standard. Per the NFM and OPNAVINST 3710.7.

Prerequisite. INST-109.

Ordinance. N/A

External Syllabus Support. N/A

132. CORE BASIC TRAINING

1. General. The focus of Core Basic Training is to train the copilot in right seat (pilot-not-flying) duties. Upon completion of this phase of training, the pilot will be qualified to operate as a copilot, day or night in the basic Core Skill mission areas. This includes Air-To-Air Refueling (AAR), Tactical Navigation (TACNAV), formation, Aerial Delivery (AD), long range navigation, DASC(A), Assault Landing Zone/Expeditionary Airfield (ALZ/EAF) operations, and threat reaction in an IR threat environment. T3Ps may assist in mission planning. However, the TPC shall conduct the mission brief for each initial event.

a. At the completion of this phase, the copilot may be recommended for upgrade to T2P by the APRB, complete the T2P NATOPS check (RQD-684) check-ride, and be designated T2P by the commanding officer. While T2P designation is not a requirement to begin Core Advanced training, it should be obtained as soon as possible to provide the commander a measure of Core Basic skill progression.

b. Transition pilots shall follow the Basic POI. Series Conversion (SC) and Refresher (R) syllabus pilots entering Core Basic training must have completed the appropriate Core Skill Introduction training. Refresher pilots shall follow the Refresher POI and Series Conversion pilots shall follow the Series Conversion POI.

c. Pilots shall receive initial training by the appropriate instructor as delineated in the respective T&R event. Once a pilot has completed the initial event, the pilot shall be considered qualified in that event.

d. Pilots conducting Night Systems (NS) training shall be instructed by an NSI for all NVD events until they are NS qualified (NSQ). After NS qualification, subsequent initial NVD events may be flown with the appropriate instructor as delineated in the respective T&R event.

e. Evaluated simulator events shall be conducted with either an appropriate instructor or an appropriately qualified Contract Simulator Instructor (CSI).

f. In the event of WST non-availability, simulator events should be conducted in the aircraft. Appropriate Operational Risk Management (ORM) policies should be used to reduce risk associated with not using a WST.

2. Familiarization

a. Purpose. Train the pilot in NATOPS procedures to include pre-flight and in-flight normal, emergency and instrument procedures.

b. General. The familiarization stage in the Core Basic syllabus is designed to refresh the T3P on basic procedures, introduce individual squadron Standing Operating Procedures (SOP) and evaluate the pilot's ability to perform basic copilot duties in the right seat.

(1) Transition and Series Conversion (SC) pilots shall complete the entire Familiarization stage. Refresher (R) pilots are only required to complete FAM-201 prior to continuing Core Basic training.

(2) This stage shall be instructed by a squadron ANI and must be completed prior to continuing Core Basic Training.

c. Crew Requirements. Two pilots are required for simulator events. The minimum crew as defined by the NFM or NTTP is required for flight events.

d. Ground/Academic Training. Pilot shall be prepared to discuss squadron and station local SOPs. Instructor shall ensure pilot has access to all required reference material to continue Core Basic Training.

e. Flight and Simulator Event Training (3 Events, 7.0 Hours)

SFAM-200

3.0

SC OFT/WST S

Goal. Train the pilot in right seat normal, emergency, and instrument procedures, with an emphasis on checklist execution, terminal area procedures, basic air work, and approaches/landings.

Requirement. Practice right seat normal, emergency, and instrument procedures under day and night conditions. Demonstrate an ability to diagnose basic system malfunctions and apply the appropriate NATOPS corrective actions, and the ability to complete an instrument approach under emergency conditions.

Performance Standard. Safely fly instrument approaches with emergency procedures per NATOPS and the IFM.

Prerequisite. N/A

Ordinance. N/A

External Support Required. CSI.

FAM-201

2.0

SC 1 KC-130 A

Goal. Introduce squadron and station local SOPs to pilot. Introduce right seat day NATOPS and instrument procedures to the pilot, and allow sufficient practice of this code for the pilot to be able to pass a T3P check ride if required.

Requirement. This event shall be instructed by an ANI. The instructor shall introduce squadron and local area SOPs, course rules and SIDs/STARs for the home field. The intent of FAM-201 is to fly it the minimum number of times necessary to ensure standardization and competency. If the pilot has not completed a KC-130 T3P NATOPS check, the FAM-201 should be re-flown until the pilot has T3P recommendations from 2 separate FAM instructors before flying the T3P check ride. Emphasize ability to diagnose basic system malfunctions and apply the appropriate NATOPS corrective actions, the ability to complete an instrument approach under emergency conditions, instrument procedures knowledge, systems and limitations knowledge, CRM, and radio/checklist procedures.

Performance Standard. Safely fly instrument approaches with emergency procedures per NATOPS and the IFM.

Prerequisite. Completion of the KC-130 FRS, C-130 USAF pilot initial qualification course, or the current USMC accepted C-130 training program. SFAM-200.

Ordinance. N/A

External Support Required. N/A

FAM-202

3.0

SC,R 1 KC-130 A N

Goal. Introduce night right seat NATOPS and instrument procedures to the pilot.

Requirement. This event shall be instructed by an ANI. Emphasis shall be on ability to diagnose basic system malfunctions and apply the appropriate NATOPS corrective actions, the ability to complete an instrument approach under emergency conditions, instrument procedures, systems and limitations knowledge, CRM, and radio/checklist procedures, aircraft lighting, and other night-specific considerations.

Performance Standard. Safely fly instrument approaches with emergency procedures at night per NATOPS and the IFM.

Prerequisite. FAM-201.

Ordinance. N/A

External Support Required. N/A

3. Night Systems (NS)

a. Purpose. To train the pilot in NS. The pilot will be capable of performing crew duties using NVDs during HLL or LLL conditions.

b. General

(1) The NS qualification syllabus consists of SNS-203, NS-204, NS-205, STACNAV-222, TACNAV-223 and TACNAV-224. In the event of WST nonavailability, simulator events should be conducted in the aircraft. Pilots successfully completing these requirements may be issued an appropriate qualification letter by the squadron commander and log RQD-695.

(2) Series Conversion pilots that were previously designated NSQ may be issued the NSQ qualification letter and log RQD-695 upon successful completion of NS-204 and NS-205.

(3) Pilots conducting NS training shall be instructed by an NSI for all NVD events until they are NS qualified (NSQ). After NS qualification, subsequent initial NVD events may be flown with the appropriate instructor as delineated in the respective T&R event description.

c. Crew Requirements. Two pilots are required for simulator events. The minimum crew as defined by the NFM or NTP is required for flight events.

d. Ground/Academic Training. MAWTS-1 KC-130 NVD 1 and 2 ASP courses and NITE lab.

e. Flight and Simulator Event Training (3 Events, 7.0 hours)

SNS 2033.0 SC,R (OFT/WST) S NS

Goal. Introduce the pilot to the use and wear of NVDs. Emphasize cockpit pre-flight, in-flight donning, and CRM. The pilot should be exposed to various light levels throughout the training period.

Requirements. Discuss NVG flight equipment requirements, astronomical data, mission planning requirements and software (Solar Lunar Almanac Program [SLAP]). Introduce NVG setup and calibration using the Hoffman 20/20 box and discuss the use of eye lanes. Introduce ground procedures to include cockpit pre-flight, taxi, takeoff, and aborts. Introduce flight procedures to include terminal area operations under different airfield lighting configurations, NVG and aircraft emergencies, CRM, and high altitude and low altitude flight orientation.

Performance Standard. Properly pre-flight and don NVGs. Diagnose NVG emergencies and apply corrective action. Understand capabilities and limitations of NVGs under HLL and LLL conditions.

Prerequisite. Completion of NSQ ground syllabus.

Ordinance. N/A

External Syllabus Support. CSI.

NS 2042.0 SC 1 KC-130 A NS

Goal. Introduce the pilot to NVG operations under HLL conditions.

Requirements. The initial event shall be flown from the right seat and instructed by an NSI. Instruct the T3P in the use of NVGs to include normal and emergency procedures at altitude and in the terminal environment. The instructor shall demonstrate and introduce NVG touch and go's to the student. A minimum of 5 touch and go's and 1 full stop should be completed by the pilot under instruction. Emphasize NVG considerations, calibration, preflight, and in-flight normal and emergency procedures. Additionally, the pilot shall be introduced to mission planning software.

Performance Standard. The pilot shall demonstrate the ability to properly pre-flight and don NVGs, diagnose NVG emergencies and apply corrective action, understand capabilities and limitations of NVGs under HLL conditions, and demonstrate the ability to land the aircraft from the right seat on NVGs.

Prerequisite. NITE Lab, NVD 1&2 complete, FAM 201/202, SNS-203.

Ordinance. N/A

External Syllabus Support. N/A

NS 2052.0 SC,R 1 KC-130 A NS

Goal. Introduce pilot to NVG operations under LLL conditions.

Requirements. The initial event shall be flown from the right seat and instructed by an NSI under LLL conditions. Instruct the T3P in the use of NVGs during LLL conditions to include normal and emergency procedures at altitude and in the terminal environment. The instructor shall demonstrate and introduce NVG touch and go's to the student. A minimum of 5 touch and go's and 1 full stop shall be completed by the pilot under instruction. Focus on the capabilities and limitations of the NVGs under LLL conditions, preflight, emergency procedures, calibration, preparation and in-flight use. The pilot will review NVG mission planning software, and demonstrate a knowledge of normal and emergency procedures outlined in the NFM and NVG specific items in the MAWTS-1 NVD fixed-wing manual.

Performance Standard. The pilot shall demonstrate the ability to properly pre-flight and don NVGs, diagnose NVG emergencies and apply corrective action, understand capabilities and limitations of NVGs under LLL conditions and demonstrate the ability to land the aircraft from the right seat on NVGs.

Prerequisite. NS-204.

Ordinance. N/A

External Syllabus Support. N/A

4. Air-to-Air Refueling (AAR)

a. Purpose. Train pilot in AAR procedures. The Core Basic AAR stage shall be flown by the T3P in the right seat and instructed by a T&R instructor.

b. General

(1) Upon completion of this stage the T3P shall be capable of functioning as a right seat copilot on fixed and rotary-wing AAR missions.

(2) The applicable Core Basic FAM sortie shall be complete prior to commencing the AAR stage. For instance, before a T3P completes the initial day FWAR (AR-210), the day FAM sortie must be complete (FAM-201).

c. Crew Requirements. The minimum crew as defined by the NFM or NTTP is required for flight events to include one observer per operated aerial refueling pod.

d. Ground/Academic Training. The T3P shall be familiar with documents governing AAR procedures to include the KC-130 NATOPS, KC-130 TACMAN/NTTP, NATOPS AAR Manual and ATP-56M NATO AAR Manual. Complete the Tactical Aerial Refueling lecture from the MAWTS-1 Academic Support Package (ASP).

e. Flight and Simulator Event Training (4 Events, 16.0 Hours).

AR-210 4.0 1 KC-130 A

Goal. Introduce pilot to day single tanker, fixed-wing or tilt-rotor AAR procedures.

Requirement. The initial event shall be instructed by a T&R instructor. Focus on receiver management, communications, checklist execution and copilot duties from initial check-in

through completion of AAR. Introduce and practice copilot duties and CRM. Use of EMCON procedures is not recommended.

Performance Standard. Demonstrate the ability to control receiver aircraft from rendezvous to completion of AAR. Train in receiver management and communication from initial check-in through completion of AAR. Additionally, demonstrate knowledge of normal and emergency procedures outlined in the NFM, AAR Manual and KC-130 TACMAN.

Prerequisite. FAM 201.

Ordinance. N/A

External Syllabus Support. Fixed-wing or tilt-rotor receiver aircraft.

AR-211

4.0 SC 1 KC-130 A N (NS)

Goal. Introduce pilot to night single tanker, fixed-wing or tilt-rotor AAR procedures.

Requirement. The initial event shall be instructed by a T&R instructor. This sortie may be flown in either aided or unaided conditions since there is no appreciable difference in procedures or level of difficulty between the two. However, for a T3P to fly this event on NVGs, the T3P must be either NSQ or must fly with an NSI. Focus on receiver management, communications, checklist execution and copilot duties from initial check-in through completion of AAR. Practice copilot duties and CRM. Use of EMCON procedures is not recommended.

Prerequisite. FAM-202, AR-210.

Performance Standard. Demonstrate the ability to control receiver aircraft from rendezvous to completion of AAR. Perform accurate KC-130 fuel computations. Additionally, demonstrate knowledge of normal and emergency procedures outlined in the NFM, AAR Manual and KC-130 TACMAN/NTTP.

Ordinance. N/A

External Syllabus Support. Fixed-wing or tilt-rotor receiver aircraft.

AR-212

3.0 1 KC-130 A

Goal. Introduce pilot to day single tanker, rotary-wing AAR procedures.

Requirement. The initial event shall be instructed by a T&R instructor. A minimum of two (2) rendezvous' shall be demonstrated by the instructor. Focus on receiver management, communications, checklist execution and copilot duties from initial check-in through completion of AAR. Practice copilot duties and CRM. Use of EMCON procedures is not recommended.

Prerequisite. FAM-201.

Performance Standard. Demonstrate the ability to control receiver aircraft from rendezvous to completion of AAR.

Perform accurate KC-130 fuel computations. Additionally, demonstrate knowledge of normal and emergency procedures outlined in the NFM, AAR Manual and KC-130 TACMAN.

Ordinance. N/A

External Syllabus Support. Rotary-wing receiver aircraft.

AR-213

3.0

SC 1 KC-130 A NS

Goal. Introduce the T3P to night single tanker, rotary-wing AAR procedures while utilizing NVGs.

Requirement. The initial event shall be instructed by an NSI under HLL or LLL conditions. A minimum of two (2) rendezvous shall be demonstrated by the instructor. Focus on receiver management, communications, checklist execution and copilot duties from initial check-in through completion of AAR. Introduce and practice copilot duties and CRM. Use of EMCON procedures is not recommended.

Prerequisite. FAM-202, AR-212, NS-204 or NS-205 (depending on light level).

Performance Standard. Demonstrate the ability to control receiver aircraft from rendezvous to completion of AAR. Perform accurate KC-130 fuel computations. Understand and apply the proper controls for operations under HLL or LLL conditions. Additionally, demonstrate knowledge of normal and emergency procedures outlined in the NFM, AAR Manual and KC-130 TACMAN.

Ordinance. N/A

External Syllabus Support. Rotary-wing receiver aircraft.

5. Tactical Navigation

a. Purpose. Train the pilot in low altitude navigation to and from an objective area requiring detection or threat avoidance. The syllabus introduces low altitude navigation and Low Altitude Tactics (LAT).

b. General

(1) Upon successful completion of TACNAV-221, the T3P shall be considered Right Seat LAT Qualified and should log RQD-620. The T3P may fly as the right seat copilot on missions requiring LAT.

(2) Non-LAT sorties shall be flown at low-level minimums as defined in the T&R Program Manual.

(3) LAT minimum altitudes and rules of conduct are defined in the T&R Program Manual.

(4) It is recommended that during this stage of instruction, IR SAM Threat Reaction (THRXI-261) be completed. THRXI-261 shall be instructed by a squadron LATI. Refer to the THXRI event description for specific sortie and ordnance requirements.

c. Crew Requirements. Two pilots, a navigator and TSO are recommended for simulator events. The minimum crew as defined by the NFM or NTTP is required for flight events.

d. Ground/Academic Training. Review the Low Level Navigation and LAT Chapters of the KC-130 TACMAN/NTTP. A squadron LATI or WTI shall administer KC-130 LAT 1, KC-130 LAT 2, LAT Maneuvering, and KC-130 Stress and Performance Limitations. These courses may be found in the MAWTS-1 KC-130 Specific Academic Support Package.

e. Flight and Simulator Event Training (5 Events, 10 Hours)

TACNAV 220

2.0

1 KC-130 A

Goal. Introduce the pilot to day low level navigation procedures.

Requirements. The initial event shall be instructed by a T&R instructor. Plan and execute a VFR navigation route consisting of at least 6 points on a published MTR. Emphasize chart-to-ground interpretation and tactical pilotage. The route should terminate in an actual or simulated objective area requiring actions from IP inbound (either to a simulated airdrop, self-contained approach or RWAAR track). The TSO shall be the primary navigator. The T3P will conduct this sortie from the right seat.

Prerequisite. FAM 201.

Performance Standard. Demonstrate an understanding of terrain masking, CRM, timing corrections, chart to ground interpretation, and low level considerations/hazards.

Ordinance. N/A

External Syllabus Support. Approved Military Training Route (MTR) or restricted area.

TACNAV-221

2.0

SC 1 KC-130 A

Goal. Demonstrate to the pilot day right seat LAT procedures.

Requirements. The initial event shall be instructed by a LAT I. The LAT I shall introduce flying at comfort level, terrain masking, ridgeline crossing, lookout doctrine, hard turns, break turns, bunts, jinks and IR threat reaction maneuvers. The route flown should afford the opportunity to perform LAT maneuvering, e.g. ridges, valleys, open areas and easily identifiable terrain features. The T3P will focus on right seat copilot duties during this sortie and upon successful completion, will be qualified for Right Seat LAT. The T3P should log the RQD-620 tracking code.

Performance Standard. The T3P must be capable of performing copilot duties in the LAT environment to include tactical pilotage, secondary navigator, and CRM.

Prerequisite. FAM-201, TACNAV-220.

Ordinance. N/A.

External Syllabus Support. LAT approved MTR or restricted area.

STACNAV-222 2.0 SC OFT/WST S NS

Goal. Introduce the pilot to NVG low level procedures.

Requirement. Pilot will plan and navigate a low level route of at least 6 points at night. Emphasize chart-to-ground interpretation and tactical pilotage while utilizing NVGs. This event may be waived if an NVG compatible simulator is not available.

Performance Standard. Demonstrate an understanding of terrain masking, CRM, timing corrections, chart-to-ground interpretation, and NVG considerations/hazards.

Prerequisite. FAM-201.

Ordinance. N/A

External Syllabus Support. CSI.

TACNAV-223 2.0 1 KC-130 A NS

Goal. Introduce the pilot to right seat, NVG low level navigation under HLL.

Requirement. The initial event shall be instructed by a NSI. Plan and execute a low level navigation route consisting of at least 6 points on a published MTR. The route should terminate in an actual or simulated objective area requiring actions from IP inbound (either to a simulated airdrop or self-contained approach). Emphasize chart-to-ground interpretation and tactical pilotage while utilizing NVGs.

Performance Standard. Arrive over the objective plus or minus 30 seconds, demonstrate an understanding of terrain masking, CRM, timing corrections, chart-to-ground interpretation, and NVG considerations/hazards.

Prerequisite. NS-204, TACNAV-220, STACNAV-222.

Ordinance. N/A

External Syllabus Support. Approved MTR or restricted area.

TACNAV-224 2.0 SC 1 KC-130 A NS

Goal. Introduce the pilot to right seat, NVG low level navigation under LLL.

Requirement. The initial event shall be instructed by an NSI. Plan and execute a low level navigation route consisting of at least 6 points on a published MTR. The route should terminate in an actual or simulated objective area requiring actions from IP inbound (either to a simulated airdrop or self-contained approach). The NSI shall discuss and introduce procedures and CRM required under LLL. Emphasize chart-to-ground interpretation and tactical pilotage while utilizing NVGs. Upon successful completion of this sortie, the pilot

will be NSQ, and the pilot should log the RQD-695 tracking code.

Performance Standard. Arrive over the objective plus or minus 30 seconds, demonstrate an understanding of terrain masking, CRM, timing corrections, chart-to-ground interpretation, and LLL NVG considerations/ hazards.

Prerequisite. NS-205, TACNAV-223.

Ordinance. N/A

External Syllabus Support. Approved MTR or restricted area.

6. Formation

a. Purpose. To train the T3P in KC-130 formation wingman duties and procedures.

b. General

(1) The Core Basic Formation syllabus is designed to introduce the T3P to copilot duties as a wingman in a flight of 2 or more KC-130s.

(2) Upon completion of this stage, the T3P will be capable of flying formation as a qualified copilot.

(3) The focus of formation training should be on operational employment and maintaining formation as part of a tanker cell. This includes mission/fuel planning, inter-flight communications, departure and recovery procedures, and planned and inadvertent weather penetrations.

(4) For initial NS formation training, an NSI is required if the T3P is not NSQ.

c. Crew Requirements. Two pilots are required for simulator events. The minimum crew as defined by the NFM or NTPP is required for flight events.

d. Ground/Academic Training. The instructor and T3P shall review the KC-130 TACMAN/NTPP Formation chapter and the KC-130 formation AAR procedures as defined in the NATOPS AAR Manual.

e. Flight and Simulator Event Training (3 Events, 6.0 Hours)

SFORM-230

2.0

WST S

Goal. Introduce T3P to pilot and copilot duties and procedures as a KC-130 formation wingman.

Requirement. This sortie should be completed with the pilot alternating between the left and right seats. The instructor shall introduce day/night section formation procedures, proper start, taxi, run-up, and takeoff procedures in a formation. Introduce management of all comm/nav equipment as associated with formation flight and proper formation communications procedures. Demonstrate day section and division formation positions and procedures, break-up/rendezvous and lead changes.

Performance Standard. The T3P shall accurately describe formation positions.

Prerequisite. FAM-201.

Ordinance. N/A

External Syllabus Support. CSI.

FORM-231

2.0 2 KC-130 A

Goal. Introduce T3P to copilot duties and procedures as a KC-130 formation wingman.

Requirement. Initial event shall be instructed by T&R instructor. T3P shall fly in the right seat. The instructor shall introduce formation mission briefing requirements and demonstrate day section formation positions and procedures, break-up and rendezvous, and lead changes. Introduce proper start, taxi, run-up, takeoff, recovery, and landing procedures in a formation. Introduce proper management of all comm/nav equipment as associated with formation flight and proper formation communications procedures.

Performance Standard. The T3P shall accurately describe formation positions and be familiar with references stated in paragraph 6.d. above.

Prerequisite. FAM-201.

Ordinance. N/A

External Syllabus Support. Military Operating Area (MOA) warning area or appropriately reserved airspace.

FORM-232

2.0 SC 2 KC-130 A

Goal. Introduce T3P to copilot duties and procedures involved in flying KC-130 NVG formation.

Requirement. Initial event shall be instructed by T&R instructor. The T3P shall fly in the right seat. The instructor shall review formation mission briefing requirements and demonstrate NVG formation positions and procedures, break-up and rendezvous and lead change. Introduce proper start, taxi, runup, takeoff, recovery, and landing procedures in an NVG formation, review proper management of all comm/nav equipment as associated with formation flight and proper formation communications procedures.

Performance Standard. The T3P shall accurately describe NVG formation positions, NVG considerations and be familiar with references stated in paragraph 6.c. above.

Prerequisite. FORM-231, NSQ.

External Syllabus Support. MOA warning area or appropriately reserved airspace.

7. Air Delivery (AD)

a. Purpose. Introduce the T3P to copilot duties and procedures involved in KC-130 AD operations.

b. General

(1) The Core Basic AD syllabus is designed to introduce the T3P to copilot duties involved in basic cargo or personnel AD operations.

(2) Upon completion of this stage of instruction, the T3P shall be capable of flying as a qualified copilot when conducting Heavy Equipment (HE), Container Delivery System (CDS), personnel static line and combination airdrops.

(3) When conducting an AD in conjunction with a low level ingress, the T3P shall be qualified to fly that particular profile or must fly with the appropriate instructor for that event. Initial AD sorties flown in conjunction with initial TACNAV sorties are permitted, provided all instructor requirements are met.

(4) For initial NS AD training, an NSI is required if the T3P is not NSQ.

c. Crew Requirements. Two pilots, a TSO and Flight Engineer are recommended for simulator events. The minimum crew as defined by the NFM or NTPP is required for flight events.

d. Ground/Academic Training. Review KC-130 TACMAN/NTPP Air Delivery chapter and KC-130 TPG. Review MAWTS-1 AD courseware.

e. Flight and Simulator Event Training (3 Events, 6.0 Hours)SAD-2402.0OFT/WST S

Goal. Introduce T3P to pilot and copilot duties involved in cargo and troop AD operations.

Requirement. The instructor shall introduce basic AD profiles from IP inbound and focus on time warnings, checklist procedures, modified slowdown/shortlook procedures, emergency procedures and aircraft configuration techniques/CRM. The instructor shall introduce the T3P to CDS and HE profiles and discuss in detail LZ marking and identification techniques.

Performance Standard. The T3P shall be familiar with reference material stated in paragraph 7.d. above.

Prerequisite. FAM-201.

Ordinance. N/A

External Syllabus Support. CSI.

AD-2412.01 KC-130 A

Goal. Introduce T3P to copilot duties involved in day cargo or troop AD operations.

Requirement. The initial event shall be instructed by a T&R instructor. Review personnel, HE and CDS AD checklists and procedures. The instructor shall introduce basic AD profiles from IP inbound and focus on time warnings, checklist procedures, modified slowdown/shortlook procedures, emergency procedures and aircraft configuration techniques/ CRM. An

actual personnel or cargo AD is required for initial qualification.

Performance Standard. The T3P shall demonstrate the ability to navigate to the DZ, communicate with the DZ and perform appropriate checklist items for AD procedures. Additionally, demonstrate knowledge of normal and emergency procedures outlined in the NFM and KC-130 TACMAN.

Prerequisite. FAM-201, SAD-240.

External Support. AD unit of any service for cargo rigging and DZ control.

AD-242

2.0

SC 1 KC-130 NS

Goal. Introduce T3P to copilot duties involved in night cargo or troop AD operations while utilizing NVGs.

Requirement. The initial event shall be instructed by an NSI or WTI and conducted under HLL or LLL conditions. Review personnel/cargo AD procedures. Emphasize LZ identification, CRM and AD procedures. An actual personnel or cargo AD is required for initial qualification.

Prerequisite. NS-204 (if HLL), NS-205 (if LLL), AD-241.

Performance Standard. The T3P shall demonstrate the ability to navigate to the DZ, communicate with the DZ and perform appropriate checklist items for AD procedures while utilizing NVGs. Additionally, demonstrate knowledge of normal and emergency procedures outlined in the NFM and KC-130 TACMAN.

External Support. AD platoon for cargo rigging/DZ control.

8. Long Range Navigation

a. Purpose. Review long-range, overwater navigation procedures and introduce T3P to squadron SOPs concerning deployment operations.

b. General

(1) This stage shall train the T3P in long-range overwater navigation to include performance computations, fuel planning, ICAO procedures, and copilot duties associated with aircraft deployment operations.

(2) Upon completion of this stage the T3P shall be capable of deploying as a qualified copilot on long-range overwater operations.

(3) This sortie may be instructed by a proficient TPC.

c. Crew Requirements. The minimum crew as defined by the NFM.

d. Ground/Academic Training. The TPC shall introduce applicable SOPs, Foreign Clearance Guide, FLIPs, and review performance computations referencing the KC-130 NFM.

e. Flight and Simulator Event Training (1 Event, 8.0 Hours)

LRNAV-250 8.0 SC 1 KC-130 (N)

Goal. Introduce T3P to copilot duties involved in long-range, overwater navigation procedures.

Requirement. Review aircraft performance computations to include cruise profiles, fuel planning/monitoring, passenger and crew oxygen requirements, cargo considerations and overwater emergency procedures. Copilot administrative duties involving aircraft deployment operations shall also be introduced.

Prerequisite. FAM-202.

Performance Standard. The T3P shall be familiar with references identified in paragraph 8.d. above, understand the different cruise profiles and appropriate application, and be proficient in the use of DOD FLIPs.

External Support. N/A.

9. Threat Reaction

a. Purpose. Train the pilot in the use of ASE and threat counter-tactics in a small arms, AAA, and infrared (IR) SAM threat environment.

b. General

(1) Pilots shall be introduced to the KC-130FRT ASE suite and mission planning considerations for IR SAM defense. The sortie should focus on aircrew immediate action drills when confronted with threat systems from both front and rear aspects under varying mission profiles.

(2) Upon completion of this phase, the pilot will be familiar with the mission planning and operational considerations associated with the ASE suite, expendable requirements, and tactical CRM.

(3) The use of Smokey SAM pyrotechnics and Missile Warning System stimulators is recommended. Aircrew training officers may have to be creative in gaining the best possible training due to the limited availability of expendables and ranges.

(4) Simulator events may be waived in the absence of a suitable device.

c. Crew Requirements. Two pilots are required for simulator events. The minimum crew as defined by the NFM or NTP is required for flight events.

d. Academic/Ground Training. Review the NFM, KC-130 TACMAN/NTP, Classified TACMAN/NTP, AFTTP 3-1 Threat Reference Guide. A WTI should administer the KC-130 ASE, DEFTAC/ACCT, and Threat Counter-tactics classes from the MAWTS-1 KC-130 Specific ASP.

e. Flight and Simulator Training (2 Events, 4.0 Hours)

STHRX(I)-260 2.0 SC, R WST S

Goal. Introduce threat reaction drills and tactical CRM against small arms, AAA and IR SAM threat systems.

Requirement. Introduce the ASE counter measures dispensing system setup, missile warning system setup, jamming system, and threat reaction. The pilot should be exposed to a variety of threat situations of increasing intensity using both the Automatic and Manual modes of the dispensing system. Threat reaction maneuvering should include the take-off, cruise and approach phases of flight.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. CSI.

THR(XI)-261 2.0 SC KC-130 A/S (N) (NS)

Goal. Introduce the operational use of ASE and threat counter-tactics against small arms, AAA and IR SAM threat systems.

Requirement. This event shall be instructed by a LATI. Introduce the ASE counter measures dispensing system setup, missile warning system setup, jamming system, and threat reaction. The pilot should be exposed to a variety of threat situations of increasing intensity using both the Automatic and Manual modes of the dispensing system. Threat reaction maneuvering should include the take-off, cruise and approach phases of flight.

Performance Standard. The pilot should be able to correctly operate the aircraft's ASE suite in an IR SAM environment, and react timely and correctly to threat calls. Proper CRM shall be performed in threat reaction.

Prerequisite. STHR(XI)-260, (RQD-603 or TACNAV-225 and flown with a NSI if conducted on NVGs).

Ordinance. 300 flare expendables.

External Syllabus Support. Appropriate counter-measures range, a Smokey SAM crew with a minimum of 5 Smokey SAMs, MWS stimulator team if available.

8. Assault Landing Zone (ALZ)

a. Purpose. Introduce the T3P to copilot duties associated with ALZ and rapid ground refueling operations.

b. General

(1) The T3P shall be introduced to day, night and NVG ALZ operations to include visual and self-contained approach procedures, precision landings to short fields, and ground operating procedures.

(2) Upon completion of this phase the T3P will be qualified to fly as a copilot during day, night and NVG ALZ operations.

(3) Initial ALZ events shall be instructed by either a WTI or NSI.

(4) For the purposes of this training syllabus, ALZ operations are defined as terminal area operations from an airfield prepared with either day

or night EAF markings as defined in the KC-130 TACMAN/NTTP. Ideally, the MMT will be utilized for terminal control with tactical NAVAIDS available. A KC-130 capable unimproved ALZ is recommended, but not required.

(5) It is recommended that RGR-274 be conducted at an EAF, however it is not required. The RGR should include transferring fuel to receiver aircraft under tactical conditions.

c. Crew Requirements. Two pilots and a TSO are required for simulator events. The minimum crew as defined by the NFM or NTTP is required for flight events.

d. Academic/Ground Training. T3Ps should review the KC-130 TACMAN/NTTP ALZ and RGR chapters, maximum effort performance calculations in the KC-130 NFM, and the ALZ class in the MAWTS-1 KC-130 Specific ASP.

e. Flight and Simulator Events (4 Events, 9.0 Hours)

<u>SALZ-270</u>	<u>3.0</u>	<u>SC</u>	<u>OFT/WST</u>	<u>S</u>	<u>NS</u>
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Goal. Introduce the T3P to right and left seat duties and procedures during expeditionary airfield operations.

Requirement. The T3P should have an opportunity to occupy both the left and right seats during the course of this event. This event requires a TSO for SCA procedures. This event shall be conducted under day and night aided conditions. The instructor shall discuss briefing requirements for expeditionary airfield operations, introduce max effort performance computations, discuss NVG CRM requirements and introduce max effort takeoff and landing procedures and CRM. Introduce ALZ approaches, unimproved EAF ground operating procedures, and COL procedures. NVGs should be used for a portion of this event if able.

Performance Standard. Prepare a TOLD card per data provided on the ATF.

Prerequisite. SFAM-200.

Ordinance. N/A

External Support. CSI.

<u>ALZ-271</u>	<u>3.0</u>	<u>SC</u>	<u>1 KC-130</u>	<u>A</u>
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Goal. Introduce the T3P to right seat duties and procedures during day expeditionary airfield operations.

Requirement. Initial event shall be instructed by ANI, WTI. T3P shall fly in the right seat. Instructor shall demonstrate briefing requirements for expeditionary airfield operations, introduce max effort performance computations, max effort takeoff and landing procedures and CRM. Introduce visual and self-contained ALZ approaches, unimproved EAF ground operating procedures, and COL procedures.

Performance Standard. Prepare an accurate TOLD card for the mission per NATOPS Performance Manual. Demonstrate the ability to satisfactorily complete copilot duties in an ALZ environment to include ATC communication, performance

computations, tactical checklists, and aircraft performance monitoring.

Prerequisite. FAM-201, SALZ-270.

Ordinance. N/A

External Support. Standard USMC ALZ day panel setup utilizing AMP-1 markings. MMT or MWSS EAF personnel for terminal control, or USAF Special Tactics Team (SST).

ALZ-272

3.0 SC 1 KC-130 A NS

Goal. Introduce the T3P to right seat duties and procedures during NVG expeditionary airfield operations.

Requirement. Initial event shall be instructed by an ANI, WTI or NSI. The T3P shall fly in the right seat. This event shall be conducted on NVGs under any light level. COL is optional. Instructor shall demonstrate briefing requirements for NVG expeditionary airfield operations, discuss NVG CRM requirements, discuss unaided ALZ considerations, demonstrate NVG max effort takeoff and landing procedures and CRM, and NVG ALZ approach procedures. Review max effort performance computations.

Performance Standard. Prepare a TOLD card for the mission per NATOPS Performance Manual. Demonstrate the capability to satisfactorily complete copilot duties in an ALZ environment to include ATC communication, performance computations, tactical checklists, and aircraft performance monitoring.

Prerequisite. FAM-204, ALZ-271.

Ordinance. N/A

External Support. Standard USMC ALZ IR light setup utilizing AMP-1 markings. MMT or MWSS EAF personnel for terminal control, or USAF Special Tactics Team (SST).

ALZ-274

2.0 SC, R 1 KC-130 A (N) (NS)

Goal. Introduce the T3P to copilot duties during RGR operations.

Requirement. Initial event shall be instructed by T&R Instructor. Instructor shall demonstrate briefing requirements for RGR operations. Introduce personnel qualifications, duties, responsibilities and RGR CRM. Introduce RGR equipment, site weapons and passenger considerations, site configurations and threat considerations. Introduce RGR fuel planning, site setup, operation, and breakdown procedures, and NVG considerations during RGR operations (optional).

Performance Standard. Pilot shall control receivers per KC-130 TACMAN/NTTP and be familiar with the references described in paragraph 8.d. above.

Prerequisite. FAM-201, (FAM-204 if NVG).

Ordinance. N/A

External Support. Receiver aircraft. MMT or MWSS EAF personnel for terminal control, or USAF Special Tactics Team (SST).

133. CORE ADVANCED TRAINING

1. General. The focus of Core Advanced Training is to train the copilot in left-seat (pilot-flying) duties. Upon completion of this phase of training, the pilot will be qualified to perform both left seat (pilot-flying) and right seat (pilot-not-flying) duties in all core skill areas. RADAR Threat counter-tactics and multi-plane AAR shall be introduced in this phase. To maintain proficiency in a particular skill, completion of the Core Advanced event will automatically update the Core Basic event.

a. At the completion of this phase, the copilot may be recommended for upgrade to Transport Plane Commander (TPC) by the APRB, complete the TPC Upgrade syllabus, and be designated TPC by the commanding officer.

b. Transition (T) pilots shall follow the Basic POI. Series Conversion (SC) and Refresher (R) syllabus Pilots entering Core Advanced training should have completed the appropriate Core Basic training. Refresher (R) Pilots shall follow the Refresher POI and Series Conversion (SC) Pilots shall follow the Series Conversion POI.

c. Pilots shall receive initial training by the appropriate instructor as delineated in the respective T&R event. Once a pilot has completed the initial event, subsequent events may be flown with proficient aircrew. Pilots shall have completed the equivalent Core Basic event prior to completing the Core Advanced event. For instance, a pilot must have completed a TACNAV-220 (day, right seat low level) prior to completing TACNAV-320 (day, left seat low level).

d. Pilots conducting Night Systems (NS) training shall be instructed by the appropriate instructor as delineated in the respective T&R event. Pilots shall have completed the equivalent Core Basic NVG event prior to completing the Core Advanced NVG event.

e. Evaluated simulator events shall be conducted with either an appropriate instructor or an appropriately qualified Contract Simulator Instructor (CSI).

f. In the event of WST non-availability, simulator events should be conducted in the aircraft. Appropriate Operational Risk Management (ORM) policies should be used to reduce risk associated with not using a WST.

g. While TPCs remain responsible for the conduct of the mission brief, copilots should be introduced to preparing and conducting briefs in this phase in preparation for upgrade to TPC.

2. Familiarization

a. Purpose. Train the pilot in NATOPS procedures to include pre-flight and in-flight normal, emergency and instrument procedures.

b. General. The familiarization stage in the Core Advanced syllabus is designed to train the pilot in flying the aircraft, managing the aircraft and crew, and conducting NATOPS and instrument procedures from the left seat.

(1) Transition (T) and Series Conversion (SC) pilots shall complete the entire Familiarization stage. Refresher (R) pilots are required to complete the FAM-301/302 prior to continuing Core Advanced training.

(2) This stage shall be instructed by a squadron ANI and must be completed prior to continuing Core Advanced Training.

c. Crew Requirements. Two pilots are required for simulator events. The minimum crew as defined by the NFM or NTP is required for flight events.

d. Ground/Academic Training. Pilot shall review the NFM and be prepared to discuss taxi procedures, emergency procedures and cockpit management under normal and emergency situations.

e. Flight and Simulator Event Training (3 Events, 7.0 Hours)

SFAM-300 3.0 SC OFT/WST S

Goal. Introduce the pilot to left seat ground and flight procedures.

Requirement. Introduce left seat normal, emergency, and instrument procedures under day and night conditions. Emphasize taxi procedures, basic airwork, emergencies and approaches/landings. Demonstrate an ability to diagnose basic system malfunctions and apply the appropriate NATOPS corrective actions, and the ability to complete an instrument approach under emergency conditions.

Performance Standard. Safely fly instrument approaches with emergency procedures per NFM and IFM.

Prerequisite. SFAM-200.

Ordinance. N/A

External Support Required. CSI/ANI.

FAM-301 2.0 SC,R 1 KC-130 A

Goal. Introduce day left seat ground and flight procedures to the pilot.

Requirement. This event shall be instructed by an ANI. The instructor shall introduce left seat ground, taxi and flight procedures to include engine starts, taxi and braking techniques, aircraft backing, takeoff brief, and departure procedures. In-flight, the pilot shall practice approaches and landings in the 50 and 100 percent configurations. The ANI shall introduce emergency procedures to include systems malfunctions and engine out approaches and landings. A minimum of 5 touch and go's and 2 full-stop landings shall be completed.

Performance Standard. Safely fly instrument approaches under simulated emergency conditions per NATOPS and the IFM.

Prerequisite. SFAM-300.

Ordinance. N/A.

External Support Required. N/A

FAM-302

2.0

SC,R 1 KC-130 A N

Goal. Introduce night left seat NATOPS and instrument procedures to the pilot.

Requirement. This event shall be instructed by an ANI. Emphasis shall be on taxi and braking procedures, and basic airwork. The instructor should evaluate the pilot's ability to diagnose basic system malfunctions and apply the appropriate NATOPS corrective actions while flying an instrument approach. A minimum of 5 touch and go's and 2 full-stop landings shall be completed. Upon completion of this event, RQD-680 shall be logged and the pilot shall be left seat qualified to continue progression through the Core Advanced Phase.

Performance Standard. Safely fly instrument approaches under simulated emergency conditions per NATOPS and the IFM.

Prerequisite. FAM-301.

Ordinance. N/A.

External Support Required. N/A.

3. Night Systems

a. Purpose. To train the pilot in left seat night systems operations.

b. General. The pilot shall be NS qualified in the Core Basic phase; however, left seat familiarization flights are required to ensure the pilot is prepared to conduct ground and flight operations from the left seat with the use of NVGs.

(1) Transition and Series Conversion pilots shall complete this stage.

(2) This stage shall be instructed by an NSI.

c. Crew Requirements. The minimum crew as defined by the NFM or NTPP is required for flight events.

d. Ground/Academic Training. MAWTS-1 KC-130 NVD 1 and 2 ASP courses and NITE lab.

e. Flight and Simulator Event Training (1 Event, 2.0 Hours)

NS-303

2.0

SC 1 KC-130 A NS

Goal. Train pilot in left seat NVG operations.

Requirements. The initial event shall be instructed by an NSI under any light level condition. The instructor shall introduce left seat ground and flight operations using NVGs, to include normal and emergency procedures at altitude and in the terminal environment. The instructor shall demonstrate and introduce NVG touch and go's to the student. A minimum of 5 touch and go's and 1 full stop shall be completed by the pilot under instruction. Focus on the capabilities and limitations of the NVGs, normal and emergency procedures, and CRM.

Performance Standard. The pilot will review NVG mission planning software, and demonstrate knowledge of normal and emergency NVG procedures outlined in the NFM and NVG specific items in the MAWTS-1 NVD fixed-wing manual.

Prerequisite. NS-204, NS-205, FAM-302.

Ordinance. N/A

External Syllabus Support. N/A

4. Aerial Refueling

a. Purpose. Train pilot in Air-To-Air Refueling (AAR) procedures. The Core Advanced AAR stage shall be flown by the pilot in the left seat and instructed by a T&R instructor.

b. General

(1) Upon completion of this stage the pilot shall be capable of functioning in the left (pilot-flying) seat on fixed, tilt-rotor and rotary-wing AAR missions.

(2) The applicable Core Basic AAR sortie shall be complete prior to commencing the Core Advanced AAR stage. For instance, before a pilot completes the initial day FWAR (AR-310), the day right seat FWAR sortie (AR-210) must be complete. The Core Advanced day and night FAMs may be completed in conjunction with the equivalent Core Advanced AAR events. However, instructor requirements shall be adhered to. For instance, the initial left seat FWAR sortie (AR-311) may be completed at night on NVGs in conjunction with the pilot's initial NVG left seat FAM (NS-303) provided an NSI is instructing the flight and all prerequisites are complete.

c. Crew Requirements. The minimum crew as defined by the NFM or NTTP is required for flight events to include one observer per operated aerial refueling pod.

d. Ground/Academic Training. The pilot shall review the documents governing AAR procedures to include the KC-130 NATOPS, KC-130 TACMAN/NTTP, NATOPS AAR Manual and ATP-56M NATO AAR Manual.

e. Flight and Simulator Training (3 Events, 12.0 Hours)

<u>AR-311</u>	<u>3.0</u>	<u>SC,R 1 KC-130 (N) (NS)</u>
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Goal. Introduce the pilot to left seat day/night single tanker, fixed-wing/tilt-rotor AAR procedures.

Requirement. This event can be flown in either day or night conditions with NVGs optional. The initial day and night (unaided or aided) event shall be instructed by a T&R instructor. Conduct single tanker rendezvous procedures and receiver management. Discuss emergency procedures related with air-to-air refueling. Focus on basic airwork and navigation/coordination to and from the refueling area. Use of EMCON procedures is recommended.

Performance Standard. Satisfactorily demonstrate the ability to maintain a stable platform, maintain fuel state awareness and receiver management. Additionally, demonstrate

knowledge of normal and emergency procedures, and CRM outlined in the NFM, AAR Manual and KC-130 TACMAN.

Prerequisite. FAM-301, AR-210, (FAM-302, AR-211 if night), (NS-303 if utilizing NVGs).

Ordinance. N/A.

External Syllabus Support. Fixed-wing or tiltrotor receivers.

AR-312

3.0 R 1 KC-130 A

Goal. Introduce the pilot to left seat day single tanker, rotary-wing AAR procedures.

Requirement. Conduct single tanker rendezvous procedures and receiver management. Fly a rotary-wing AAR mission from the left seat, conducting a minimum of three (3) rendezvous'. The initial event shall be instructed by a T&R instructor. Discuss emergency procedures related to air refueling. Focus on basic airwork and navigation/coordination to and from the refueling area. If flown in conjunction with a low level route, plan for an ARCP, ARCT and ENDAR.

Performance Standard. Satisfactorily demonstrate the ability to effect the rendezvous, maintain a stable platform, maintain fuel planning awareness and receiver management. Additionally, demonstrate knowledge of normal and emergency procedures outlined in the NFM, AAR Manual and KC-130 TACMAN.

Prerequisite. FAM-301, AR-212.

Ordinance. N/A

External Syllabus Support. Rotary-wing receivers.

AR-313

3.0 1 KC-130 NS

Goal. Introduce the pilot to left seat NVG single tanker, rotary-wing AAR procedures.

Requirement. Conduct single tanker rendezvous procedures and receiver management. Fly a rotary-wing AR mission from the left seat, conducting a minimum of three (3) rendezvous'. The initial event shall be instructed by a NSI. Discuss emergency procedures related to air refueling and NVG considerations. Focus on basic airwork and navigation/coordination to and from the refueling area. If flown in conjunction with a low level route, plan for an ARCP, ARCT and ENDAR.

Performance Standard. Satisfactorily demonstrate the ability to effect the rendezvous, maintain a stable platform, maintain fuel planning awareness and receiver management. Additionally, demonstrate knowledge of normal and emergency procedures outlined in the NFM, AAR Manual and KC-130 TACMAN.

Prerequisite. FAM-301, NS-303, AR-213, AR-312.

Ordinance. N/A.

External Syllabus Support. Rotary-wing receivers.5. Tactical Navigation

a. Purpose. Train the pilot in left seat (pilot-flying) low altitude navigation to and from an objective area requiring detection or threat avoidance. The syllabus introduces low altitude flight, LAT, piloting techniques, and CRM.

b. General

(1) Upon successful completion of TACNAV-322, the pilot will have fulfilled the requirements for the LAT Qualification and log RQD-621. The pilot will be qualified to fly in the left seat (pilot-flying) or right (non-pilot-flying) seat on missions requiring LAT.

(2) Non-LAT sorties shall be flown at low-level minimums as defined in the T&R Program Manual.

(3) LAT minimum altitudes and rules of conduct are defined in the T&R Program Manual.

(4) It is recommended that during this stage of instruction, RADAR SAM Threat Reaction [THRX(R)-361] be completed. THRX(R)-361 shall be instructed by a squadron LATI. Refer to The THRX(R) event description for specific sortie and ordnance requirements.

c. Crew Requirements. The minimum crew as defined by the NFM or NTP is required for flight events.

d. Ground/Academic Training. Review the Low Level Navigation and LAT Chapters of the KC-130 TACMAN/NTP. Review the LAT 1, LAT 2, KC-130 LAT Maneuvering, and KC-130 Stress and Performance Limitations. These courses may be found in the MAWTS-1 KC-130 Specific Academic Support Package.

e. Flight and Simulator Events Training (5 Events, 10.0 Hours)

<u>TACNAV-320</u>	<u>2.0</u>	<u>SC 1 KC-130 A</u>
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Goal. Introduce day left seat low altitude navigation procedures.

Requirements. The initial event shall be instructed by a T&R Instructor. Plan and execute a VFR navigation route, consisting of at least 6 points, on a published MTR. Emphasize aircraft vector control, terrain clearance, CRM and tactical piloting. The route should terminate in an actual or simulated objective area requiring actions from IP inbound (either to a simulated airdrop, self-contained approach or RWAAR). The TSO shall be the primary navigator. The pilot shall conduct this sortie from the left seat.

Performance Standard. Arrive over the objective plus or minus 30 seconds, properly configured, and demonstrate an ability to control ground track as well as knowledge of timing corrections and chart-to-ground interpretation.

Prerequisite. FAM-301, TACNAV-220.

Ordnance. N/A

External Syllabus Support. Approved MTR or training area.

TACNAV-321

2.0 SC 1 KC-130 A

Goal. Introduce day left seat LAT procedures.

Requirements. The initial event shall be instructed by a LAT I. Minimum altitude per T&R Program manual. Introduce flying at comfort level, terrain masking, ridgeline crossing, lookout doctrine, hard turns, break turns, bunts, jinks and practice IR threat reaction maneuvers. The route flown should afford the opportunity to perform LAT maneuvering, e.g. ridges, valleys, open areas and easily identifiable terrain features. The pilot shall conduct this sortie from the left seat.

Performance Standard. Proper performance of all LAT and threat reaction maneuvers to include proper CRM.

Prerequisite. TACNAV-221, RQD-620, TACNAV-320, THRX(I)-261.

Ordinance. N/A.

External Syllabus Support. LAT approved MTR or training area.

TACNAV-322

2.0 SC,R 1 KC-130 A

Goal. Review ability to perform all LAT procedures.

Requirements. This is the LAT Qualification checkride, and shall be administered by a LATI. Upon successful completion of this flight the pilot should log the RQD-621 tracking code. The pilot will plan and execute a low level ingress to an objective and apply LAT maneuvers where applicable. A threat scenario is required with detailed brief on ASE loadout, threat capabilities and limitations, and threat counter tactics. Low level shall terminate in simulated or actual objective area.

Performance Standard. Arrive over the objective plus or minus 30 seconds and demonstrate ability to control ground track, as well as perform LAT and threat reaction maneuvers.

Prerequisite. TACNAV-321.

Ordinance. N/A

External Syllabus Support. LAT approved MTR or training area.

TACNAV-323

2.0 SC 1 KC-130 A NS

Goal. Introduce left seat, low level navigation at night under HLL conditions.

Requirement. The initial event shall be instructed by a WTI or NSI. Plan and execute a VFR navigation route, consisting of at least 6 points, on a published MTR. Emphasize aircraft vector control, terrain clearance, CRM and tactical piloting while utilizing NVGs. This event should terminate with a TOT and actual or simulated actions in an objective area (AD, ALZ, ARCP).

Performance Standard. Arrive over the objective plus or minus 30 seconds properly configured, demonstrate an understanding of terrain masking, timing corrections and chart-to-ground interpretation, and NVG considerations/hazards.

Prerequisite. TACNAV-223, TACNAV-320, FAM-303.

Ordinance. N/A

External Syllabus Support. Approved MTR or training area.

TACNAV-324

2.0

SC,R 1 KC-130 NS

Goal. Introduce the pilot to left seat, low level navigation at night under LLL.

Requirement. The initial event shall be instructed by a WTI or NSI. Plan and execute a VFR navigation route, consisting of at least 6 points, on a published MTR. Emphasize aircraft vector control, terrain clearance, CRM and tactical pilotage while utilizing NVGs. This event should terminate with a TOT and actual or simulated actions in an objective area (AD, ALZ, ARCP).

Performance Standard. Arrive over the objective plus or minus 30 seconds properly configured. Demonstrate an understanding of terrain masking, timing corrections and chart-to-ground interpretation, and NVG considerations/hazards.

Prerequisite. TACNAV-224, TACNAV-320, FAM-303.

Ordinance. N/A

External Syllabus Support. Approved MTR or training area.

6. Formation

a. Purpose. To train the pilot in left seat (pilot-flying) KC-130 formation wingman flight techniques and procedures.

b. General. The Core Advanced formation syllabus is designed to introduce the pilot to formation tactics, techniques and procedures (TTPs) as a wingman in a flight of 2 or more KC-130s.

(1) Upon completion of this stage, the pilot will be capable of flying day or night formation in either the left or right seat.

(2) The focus of formation training should be on operational employment; maintaining formation as part of a tanker cell. This includes mission/fuel planning, inter-flight communications, departure and recovery procedures, and planned and inadvertent weather penetrations.

(3) For initial night systems formation training, a NSI is required if the pilot is not NSQ.

c. Crew Requirements. The minimum crew as defined by the NFM or NTPP is required for flight events.

d. Ground/Academic Training. The pilot shall review the KC-130 TACMAN/NTPP Formation chapter, and the KC-130 formation AAR procedures as defined in the NATOPS AAR Manual.

e. Flight and Simulator Training (4 Events, 9.0 Hours)FORM-3302.0SC,R 2+ KC-130 A

Goal. Train the pilot to fly proper KC-130 day formation positions and procedures.

Requirement. Initial event shall be instructed by T&R Instructor. The initial flight should be flown as a section. If flown as a division then the initial event shall begin in the dash 2 position. The instructor shall introduce proper start, taxi, runup, takeoff, recovery, and landing procedures in a formation. Introduce day section formation positions and procedures. The pilot shall complete 3 break-up and rendezvous' and 1 lead change, and should conduct the formation mission brief.

Performance Standard. The pilot shall be capable of applying proper corrective control inputs to establish and maintain formation positions.

Prerequisite. FORM-231, FAM-301.

Ordinance. N/A

External Syllabus Support. MOA or appropriate training area.

FORM-3312.02+ KC-130 A NS

Goal. Train the pilot to fly proper KC-130 NVG formation positions and procedures.

Requirement. Initial event shall be instructed by T&R Instructor. The initial flight should be flown as a section. If flown as a division then the initial event shall begin in the dash 2 position. The pilot shall practice proper start, taxi, runup, takeoff, recovery, and landing procedures in a formation. Introduce NVG section formation positions and procedures. The pilot shall complete 3 break-up and rendezvous' and 1 lead change, and should conduct the formation mission brief.

Performance Standard. The pilot shall be capable of applying proper corrective control inputs to establish and maintain formation positions. The pilot shall demonstrate a knowledge of KC-130 formation TTPs and NVG considerations.

Prerequisite. FORM-330.

Ordinance. N/A

External Syllabus Support. MOA or approved training area.

FORM-3324.0SC 3+ KC-130 A (N) (NS)

Goal. To fly proper KC-130 division formation positions and procedures.

Requirement. Initial event shall be instructed by T&R Instructor. The pilot shall fly initial event in the left

seat. This sortie may be flown in conjunction with FORM-331 or 332.

Performance Standard. The pilot shall be capable of applying proper corrective control inputs to establish and maintain dash 3 or 4 formation positions. The pilot shall demonstrate knowledge of KC-130 division formation considerations.

Prerequisite. FORM-330, FORM-331 (if NVG), FORM-430 (if unaided).

Ordinance. N/A

External Syllabus Support. MOA or approved training area.

FORMAR-333

4.0

2+ KC-130 A (N) (NS)

Goal. Train the pilot in formation aerial refueling procedures.

Requirement. Initial event shall be instructed by T&R Instructor. The instructor shall introduce the formation aerial refueling brief, tanker/receiver fuel planning considerations, receiver management and movement around the refueling formation, and proper formation aerial refueling communications procedures. If applicable, review proper NVG equipment use and procedures.

Performance Standard. The pilot shall be capable of applying proper corrective control inputs to establish and maintain dash 3 or 4 formation positions. The pilot shall demonstrate knowledge of KC-130 division formation considerations.

Prerequisite. Day: AR-310 (AR-311 for RWAR), FORM-330 (FORM-332 if in division).

NVG: AR-310 (AR-313 for RWAR), FORM-331 (FORM-332 if in division).

Unaided: AR-310 (AR-413 for RWAR), FORM-430 (FORM-332 if in division).

Ordinance. N/A

External Syllabus Support. Receiver aircraft.

7. Aerial Delivery (AD)

a. Purpose. Introduce the pilot to left seat (pilot-flying) duties and procedures involved in KC-130 AD operations.

b. General

(1) The Core Advanced AD syllabus is designed to introduce pilot techniques in cargo or personnel AD operations.

(2) Upon completion of this stage the pilot shall be capable of flying in either the left or right seat when conducting Heavy Equipment (HE), Container Delivery System (CDS), personnel static line and combination airdrops.

(3) When conducting an AD in conjunction with a low level ingress, the pilot shall be qualified to fly that particular profile or must fly with

the appropriate instructor for that event. Initial AD sorties flown in conjunction with initial TACNAV sorties are permitted, provided all instructor requirements are met.

(4) For initial night systems AD training, an NSI is required if the pilot is not NSQ.

c. Crew Requirements. The minimum crew as defined by the NFM or NTPP is required for flight events.

e. Ground/Academic Training. Review KC-130 TACMAN/NTPP Air Delivery chapter and KC-130 TPG. Review MAWTS-1 AD courseware.

f. Flight and Simulator Training (2 Events, 4.0 Hours)

AD-340 2.0 SC,R 1 KC-130 A

Goal. Train and evaluate the pilot in day left seat air delivery procedures.

Requirement. The initial event shall be flown from the left seat and instructed by a T&R instructor. Review personnel, CDS and HE aerial delivery procedures. The pilot shall display a sound working knowledge of administrative and logistical requirements associated with DZ coordination and aircraft rigging (load certification). The pilot shall demonstrate the ability to fly the ingress, objective area profile and manage checklists for AD procedures. Emphasis should be placed on CRM and AD procedures. An actual personnel or cargo AD is required for initial qualification.

Performance Standard. Safely perform AD that lands within the drop zone.

Prerequisite. FAM-201, 301, AD-241.

Ordinance. N/A

External Syllabus Support. AD unit of any service for cargo rigging and DZ control.

AD-341 2.0 SC 1 KC-130 A NS

Goal. Train and evaluate the pilot in left seat AD procedures utilizing NVGs.

Requirement. The initial event shall be flown from the left seat and instructed by a NSI or WTI. Review personnel and CDS AD procedures. Emphasize CRM and AD procedures. The pilot shall demonstrate the ability to fly the ingress, brief objective area profile and manage checklists for AD procedures while utilizing NVGs. The pilot should display a sound working knowledge of administrative and logistical requirements associated with DZ coordination and aircraft rigging (load certification). An actual personnel or cargo AD is required for initial qualification.

Performance Standard. Safely perform AD that lands within the drop zone safety criteria.

Prerequisite. NS-303, AD-242, AD-340.

Ordinance. N/A.

External Syllabus Support. AD unit of any service for cargo rigging and DZ control.

8. Threat Reaction

a. Purpose. Train the pilot in the use of ASE and threat counter-tactics in a RADAR threat environment.

b. General

(1) Pilots shall review the KC-130FRT ASE suite and mission planning considerations for RADAR SAM defense. The sortie should focus on aircrew immediate action drills when confronted with RADAR threat systems. An aircraft with a functional ASE suite is required for the flight event.

(2) Upon completion of this phase, the pilot will be familiar with the mission planning and operational considerations associated with the ASE suite, chaff and flare requirements, and tactical CRM.

(3) The use of emitters for this stage is required. Aircrew training officers may need to be creative in gaining the best possible training due to the limited availability of expendables and ranges.

(4) Simulator events may be waived in the absence of a suitable device. Flight events may be conducted in the simulator if no suitable ranges or threat emitters are available.

c. Crew Requirements. Two pilots are required for simulator events. The minimum crew as defined by the NFM or NTTP is required for flight events.

d. Academic/Ground Training. Review the NFM, KC-130 TACMAN/NTTP, Classified TACMAN/NTTP, AFTTP 3-1 Threat Reference Guide. Review the KC-130 ASE, DEFTAC/ACCT, Stress and Performance Limitations and Threat Counter-tactics classes from the MAWTS-1 KC-130 Specific ASP.

e. Flight and Simulator Training (2 Events, 4.0 Hours)

STHRX(R)-360 3.0 SC 1 WST S

Goal. Introduce surface RADAR threat.

Requirement. Introduce the ASE RADAR Warning Receiver (RWR), symbology, and CMD5 programmer. Conduct multiple passes against simulated RADAR threat systems (from acquisition, through target tracking to launch) and initiate appropriate maneuvers and countermeasures. Threat reaction maneuvering should include low and medium altitude flight profiles. IR threat reaction shall also be reviewed during this event. In the event that a simulator is not available, this event is optional.

Performance Standard. The pilot shall demonstrate the ability to properly defend against RADAR acquisition, target tracking and launch sequences.

Prerequisite. SFAM-300, STACNAV-222, THRX(I)-261.

Ordinance. N/A.

External Syllabus Support. CSI.

THRX(R)-361 2.0 SC,R 1 KC-130J/WST A/S

Goal. Introduce surface RADAR threat during a tactical mission profile.

Requirement. Initial event shall be instructed by a LATI. Practice maneuvering the aircraft against surface-based threat emitters utilizing the RWR, and CMDS in conjunction with a tactical mission profile. Conduct multiple passes against simulated RADAR threat systems (from acquisition, through target tracking to launch) and initiate appropriate maneuvers and countermeasures. Emphasis should be placed on configuration of the system for operations in a RADAR threat environment and CRM. IR threat reaction shall also be practiced during this event. This event may be conducted in a simulator if suitable emitter ranges or ASE equipped aircraft are not available.

Performance Standard. The pilot shall demonstrate the ability to properly configure the CMDS for operations in a RADAR threat environment, and defend against RADAR acquisition, target tracking and launch sequences.

Prerequisite. STACNAV-222, STHRX(I)-260, STHRX(R)-360.

Ordinance. 160 chaff, 140 flares.

External Syllabus Support. Approved emitter range or Restricted area with mobile emitters available.

9. Assault Landing Zone (ALZ) Operations

a. Purpose. Introduce the pilot to left seat (pilot-flying) duties associated with ALZ operations.

b. General

(1) The pilot shall be introduced to day, night and NVG ALZ operations with an emphasis on visual and self-contained approach procedures, precision landings to short fields prepared by Mobile MATC Teams (MMT), and ground operating procedures.

(2) Upon completion of this phase the pilot will be qualified to fly in the left or right seat during day or night, NVG ALZ operations.

(3) Initial ALZ events shall be instructed by either a WTI or NSI.

(4) For the purposes of this training syllabus, ALZ operations are defined as terminal area operations from an airfield prepared with either day of night EAF markings as defined in the KC-130 TACMAN/NTTP. Ideally, the MMT will be utilized for terminal control with tactical NAVAIDS available. A KC-130 capable unimproved ALZ is recommended, but not required.

c. Crew Requirements. The minimum crew as defined by the NFM or NTTP is required for flight events.

d. Academic/Ground Training. Pilots should review the KC-130 TACMAN/NTTP ALZ and RGR chapters, maximum effort performance calculations in the KC-130 NFM, and the ALZ class in the MAWTS-1 KC-130 Specific ASP.

e. Flight and Simulator Training (3 Events, 6.0 Hours)ALZ-3702.0SC R 1 KC-130 A

Goal. To fly day ALZ operations.

Requirement. The initial event shall be instructed by WTI or ANI and flown by the pilot from the left seat. The pilot shall conduct the ALZ mission brief and prepare a TOLD card for the mission per the NFM. The instructor shall introduce max effort takeoff and landing procedures, ALZ approaches (self-contained and random), and unimproved EAF ground operating and taxi procedures. A minimum of 1 max-effort take-off/full-stop and 4 touch and go's shall be completed. Tactical checklists should be practiced and CRM emphasized during this event. A simulated or actual COL shall be conducted.

Performance Standard. The pilot shall consistently land within the 500' touchdown zone and demonstrate the situational awareness to manage crew duties on approach to an ALZ and during departure.

Prerequisite. ALZ-271.

Ordinance. N/A

External Support. Standard USMC ALZ day panel setup utilizing AMP-1, 2 or 3 markings. MMT or MWSS EAF personnel for terminal control, or USAF Special Tactics Team (SST).

ALZ-3712.0SC 1 KC-130 A NS

Goal. To fly NVG HLL ALZ operations.

Requirement. The initial event shall be instructed by ANI, WTI or NSI and flown by the pilot from the left seat. The pilot shall conduct the ALZ mission brief and prepare a TOLD card for the mission per the NFM. The instructor shall introduce HLL max effort takeoff and landing procedures, ALZ approaches (self-contained and random), and practice unimproved EAF ground operating and taxi procedures. A minimum of 1 max-effort take-off/full-stop and 4 touch and go's shall be completed. NVG ALZ considerations/procedures and tactical checklists (max-effort, COL) should be reviewed. CRM shall be emphasized during this event. COL is optional.

Performance Standard. The pilot shall consistently land within the 500' touchdown zone and demonstrate the situational awareness to manage crew duties on approach to an ALZ and during departure.

Prerequisite. ALZ-272, ALZ-370.

Ordinance. N/A

External Support. Standard USMC ALZ IR lighting setup utilizing AMP-1 markings. MMT or MWSS EAF personnel for terminal control, or USAF Special Tactics Team (SST).

ALZ-3722.0SC 1 KC-130 A NS

Goal. To fly NVG LLL ALZ operations.

Requirement. The initial event shall be instructed by ANI, WTI or NSI and flown by the pilot from the left seat. The pilot shall conduct the ALZ mission brief and prepare a TOLD card for the mission per the NFM. The pilot shall practice LLL max effort takeoff and landing procedures, self-contained ALZ approaches, and practice unimproved EAF ground operating and taxi procedures. A minimum of 1 max-effort take-off/full-stop and 4 touch and go's shall be completed. NVG LLL ALZ considerations/procedures and tactical checklists should be reviewed. CRM shall be emphasized during this event. COL is optional.

Performance Standard. The pilot shall consistently land within the 500' touchdown zone and demonstrate the situational awareness to manage crew duties on approach to an ALZ and during departure.

Prerequisite. ALZ-272, ALZ-371.

Ordinance. N/A

External Support. Standard USMC ALZ IR lighting setup utilizing AMP-1 markings. MMT or MWSS EAF personnel for terminal control, or USAF Special Tactics Team (SST).

134. CORE PLUS TRAINING

1. General

a. The Core Plus phase contains advanced AD, long-range overwater AAR, formation low level and Air-to-Air Defensive Tactics events. Additionally, Core Basic and Core Advanced non-NVG events are contained in this phase as they can generally be categorized as high-risk, low probability of execution.

b. Upon completion of this phase of training, the pilot will be qualified to plan and execute long range refueling operations, conduct high altitude freefall personnel AD, Battlefield Illumination (BI), and formation low level operations.

c. Depending on NVIS aircraft availability, pilots may complete a non-NVG core skill event (such as RWAR or ALZ) prior to completing the NVG equivalent. In these cases, the day sortie is required to be completed first and the unaided event will not chain the uncompleted NVG event. The equivalent day event will be chained.

d. During night unaided operations, the use of NVGs in the hand-held mode by the pilot not flying and other crew members is recommended to increase situational awareness.

2. Air Refueling

a. Purpose. To gain and maintain the capability to execute RWAR missions using non-NVIS aircraft.

b. General. Upon completion of this phase, the pilot will be qualified to fly unaided AAR missions in the appropriately designated crew position.

c. Crew Requirements. The minimum crew as defined by the NFM or NTTP is required for flight events to include 1 observer per operated aerial refueling pod.

d. Ground/Academic Training. See Core Basic and Core Advanced stages.

e. Flight and Simulator Training (5 Events, 11.0 Hours)

AR-413

3.0

SC 1 KC-130 N

Goal. Introduce the pilot to unaided single tanker, rotary-wing AAR procedures.

Requirement. The initial event shall be instructed by a T&R instructor and flown by the pilot in the left seat. The instructor shall introduce unaided rendezvous procedures and the pilot shall conduct a minimum of 3 rendezvous'. This sortie will focus on receiver management, communications, checklist execution from initial check-in through completion of AAR. Use of EMCON procedures is not recommended. Emphasize unaided considerations to include visual illusions, altitude separation requirements, use of TACAN A/A and heading calls, and aircraft lighting.

Performance Standard. Safely conduct a rendezvous with receiver aircraft, adhering to altitude separation requirements and closure rates. Satisfactorily demonstrate the ability to effect the rendezvous, maintain a stable platform, maintain fuel planning awareness and receiver management. Additionally, demonstrate knowledge of normal and emergency procedures outlined in the NFM, AAR Manual and KC-130 TACMAN.

Prerequisite. AR-212 (Right Seat), AR-312 (Left Seat).

Ordinance. N/A

External Syllabus Support. Rotary-wing receiver aircraft.

3. Long-Range Aerial Refueling

a. Purpose. To attain and maintain the long range aerial refueling Core Plus skill. Upon completion of this phase, the pilot will be capable of planning and executing long range FW/TR/RW AAR operations.

b. General

(1) The ability to plan a long range movement of receiver aircraft must be maintained at a minimum level within fleet squadrons. This event should be completed in conjunction with FORMAR-333. The event should include enroute refueling operations utilizing a rendezvous controller, ALTRVs, abort points, and pathfinders.

(2) This event is a prerequisite for the Strategic RAC Designation RQD-637.

c. Crew Requirements. The minimum crew as defined by the NFM or NTTP is required for flight events to include 1 observer per operated aerial refueling pod.

d. Ground/Academic Training. Review the MAWTS-1 Tactical AAR Courseware. Review NFM and NATOPS Air-to-Air Refueling Manual concerning long-range refueling operations.

e. Flight and Simulator Training (1 Flight, 6.0 Hours)

AR-493 6.0 2-4 KC-130 A (N)

Goal. Introduce Long Range AAR operations.

Requirement. Conduct long range FW/TR/RW aerial refueling. Both tanker and receiver performance data and fuel requirements must be planned. PFPS should be used for mission planning. Discuss and introduce coordination of movement control, ALTRVs, abort criteria, hose factor, contingency planning, RAC functions, rendezvous control and pathfinding. Review radio procedures, NAVAID/RADAR/TCAS procedures, tanker/receiver management and emergency procedures related to AAR.

Performance Standard. Successfully complete the planning and execution phase of a LRAAR movement of receiver aircraft.

Prerequisite. FORM-330, AR-311 (FWAR), AR-312 (RWAR).

Ordinance. N/A

External Support. Receiver cell, Central Altitude Reservation Facility (CARF).

4. Tactical Navigation

a. Purpose. To train in section TACNAV, section LAT and unaided low level procedures.

b. General. Upon completion of this stage, the pilot shall be capable of conducting day and NVG section low level and day section LAT. Emphasize low altitude formation techniques, formation control, tactical formations and mutual support in a low to medium threat environment.

c. Crew Requirements. The minimum crew as defined by the NFM or NTPP is required for flight events.

d. Ground/Academic Training. Review the Formation, Low Level Navigation and LAT Chapters of the KC-130 TACMAN/NTPP. Review LAT 1, LAT 2, LAT Maneuvering, and KC-130 Stress and Performance Limitations. These courses can be found in the MAWTS-1 KC-130 Specific Academic Support Package.

e. Flight and Simulator Events Training (4 Events, 8.0 Hours)

TACNAV-420 2.0 2 KC-130 A

Goal. Introduce the pilot to formation low level procedures.

Requirement. The initial event shall be instructed by a T&R Instructor. This sortie shall be flown as a section. Plan and execute a VFR navigation route consisting of at least 6 points. The pilot shall fly as wingman. Emphasize terrain clearance and tactical formation positions and mutual support. The route should terminate in an actual or simulated objective area requiring actions from IP inbound (either to a simulated

airdrop or self-contained approach). The pilot shall conduct this sortie from the left seat.

Performance Standard. Demonstrate ability to fly a tactical formation while maintaining terrain clearance in the low level environment.

Prerequisite. TACNAV-320, FORM-330.

Ordinance. N/A

External Syllabus Support. Approved MTR or training area.

TACNAV-421

2.0 2 KC-130 A

Goal. Introduce formation LAT procedures.

Requirements. The initial event shall be instructed by a LAT I. This sortie shall be flown as dash 2 of a section. Introduce flying at comfort level, terrain masking, ridgeline crossing, lookout doctrine, hard turns, break turns, bunts, jinks and IR threat reaction maneuvers from the wingman position. The route flown should afford the opportunity to perform LAT maneuvering, e.g. ridges, valleys, open areas and easily identifiable terrain features. The pilot will conduct this sortie from the left seat.

Performance Standard. Demonstrate ability to fly a tactical formation while maintaining terrain clearance in the LAT environment.

Prerequisite. TACNAV-322, FORM-330, TACNAV-420.

Ordinance. N/A

External Syllabus Support. Approved MTR or training area.

TACNAV-422

2.0 SC 1 KC-130 N

Goal. Introduce unaided low level navigation procedures.

Requirements. The initial event shall be instructed by a WTI or NSI. Plan and execute a VFR navigation route consisting of at least 6 points. Emphasize terrain clearance, MSAs, electronic terrain identification, CRM, and tactical piloting. The route should terminate in an actual or simulated objective area requiring actions from IP inbound (either to a simulated airdrop, self-contained approach or RWAAR track). The TSO shall be the primary navigator. The pilot may conduct this sortie from the either seat. Hand-held NVGs are recommended for the pilot-not-flying.

Performance Standard. Arrive over the objective plus or minus 30 seconds and demonstrate an ability to identify terrain using radar and hand held NVGs as well as an understanding of timing corrections and chart-to-ground interpretation.

Prerequisite. TACNAV-220 (Right Seat), TACNAV-320 (Left Seat).

Ordinance. N/A

External Syllabus Support. Approved MTR or training area.

TACNAV 423

2.0

SC R 2 KC-130 NS

Goal. Introduce NVG low altitude formation procedures.

Requirements. The initial event shall be instructed by a WTI or NSI. This sortie shall be flown as a section. Plan and execute a VFR navigation route consisting of at least 6 points. Emphasize terrain clearance, NVG external lighting considerations, CRM, aircraft and formation positioning, and tactical piloting. The route should terminate in an actual or simulated objective area requiring actions from IP inbound (either to a simulated airdrop, self-contained approach or RWAAR track). The TSO shall be the primary navigator. The pilot will conduct this sortie from either seat.

Prerequisite. FORM-232, TACNAV-323 (for HLL), TACNAV-224 (for LLL)

Performance Standard. Demonstrate ability to fly a tactical formation while maintaining terrain clearance in the NVG low level environment.

Ordinance. N/A

External Syllabus Support. Approved MTR or training area.

5. Formation

a. Purpose. To train in unaided KC-130 formation wingman flight techniques and procedures.

b. General. Upon completion of this phase, the pilot will be qualified to fly unaided formation missions in the appropriately designated crew position.

c. Crew Requirements. The minimum crew as defined by the NFM or NTTP is required for flight events.

d. Ground/Academic Training. Review the KC-130 TACMAN/NTTP Formation chapter, and the KC-130 formation AAR procedures as defined in the NATOPS AAR Manual.

e. Flight and Simulator Training (1 Event, 2.0 Hours)

FORM-430

2.0

2+ KC-130 A N

Goal. Train in night unaided formation procedures.

Requirement. Initial event shall be instructed by a T&R I. The pilot shall fly the initial event in the left seat. Flight should be flown as a section. If not flown as a section then the initial event shall begin in the dash 2 position. Introduce night unaided formation positions and procedures. The pilot shall conduct the formation mission brief and review proper start, taxi, runup, takeoff, recovery, and landing procedures in a formation. Practice minimum of 3 break-up and rendezvous and 1 lead change. Review proper management of all comm/nav equipment as associated with

formation flight and review proper formation communications procedures.

Performance Standards. The pilot should be capable of applying proper corrective control inputs to establish and maintain formation positions. The pilot shall demonstrate a knowledge of KC-130 formation TTPs and unaided considerations.

Prerequisite. FORM-330, (FORM-332 if in division).

Ordinance. N/A

External Syllabus Support. MOA.

6. Air Delivery (AD)

a. Purpose. The purpose of the Core Plus AD stage is to train the pilot in unaided AD, high altitude military freefall operations and battlefield illumination.

b. General

(1) Upon completion of this stage of instruction, the pilot shall be capable of conducting unaided cargo and personnel AD, high altitude military freefall and battlefield illumination missions.

(2) Prior to conducting AD-442 and 444, the pilot must be qualified in the equivalent Core Basic or Core Advanced AD event. For instance, if a pilot is going to conduct a night military freefall on NVGs from the left seat, then the AD-341 (left seat NS AD) must be complete.

c. Crew Requirements. The minimum crew as defined by the NFM or NTP is required for flight events.

d. Ground/Academic Training. Review KC-130 TACMAN/NTP Air Delivery chapter and KC-130 TPG. Review MAWTS-1 AD courseware and OPNAV 3710 altitude requirements.

e. Flight and Simulator Training (3 Events, 6.0 Hours)

AD-440 2.0 SC 1 KC-130 A N

Goal. Train the pilot in unaided cargo/personnel AD procedures.

Requirement. The event may be flown from the left or right seat and shall be instructed by a NSI or WTI. Fly an air delivery mission consisting of CDS, heavy equipment, or personnel static line. If utilizing a low level navigation route, perform a modified slowdown tactic from IP inbound. Emphasize low level navigation, checklist procedures, and CRM. Review personnel and CDS aerial delivery procedures. An actual personnel/cargo AD is required for initial qualification.

Performance Standard. Correctly identify the zone and safely perform AD that lands within the drop zone.

Prerequisite. FAM-202, AD-241 (Right seat), FAM-301, AD-340 (left seat).

Ordinance. N/A

External Support. AD unit of any service for cargo rigging and DZ control.

AD-442

2.0 1 KC-130 A (N) (NS)

Goal. Train and evaluate the pilot in day, night (NS optional) personnel high altitude AD procedures.

Requirement. The event may be flown from the left or right seat and shall be instructed by an NSI or WTI. Review personnel AD procedures and oxygen requirements for high altitude AD operations. Emphasize crew and jumpmaster coordination. An actual personnel AD is required for initial qualification.

Performance Standard. Correctly identify the zone and safely perform AD that lands within the drop zone safety criteria.

Prerequisite. Right Seat: FAM-202 (NS-204,205 if aided)
Left seat: FAM-302 (NS-303 if aided)

Ordinance. N/A.

External Support. AD unit of any service for cargo rigging and DZ control.

AD-444

2.0 1 KC-130 A N (NS)

Goal. Train the pilot in night (NS optional) area illumination procedures.

Requirement. The event may be flown from the left or right seat and shall be instructed by a T&R I. Introduce battlefield illumination procedures. Emphasize flare settings, illumination patterns, conduct of a 9-Line brief and emergency procedures. An actual expenditure of ordnance is required.

Performance Standard. Demonstrate knowledge of immediate action emergency procedures, and accurately fly the correct pattern for the type of illumination requested.

Prerequisite. Right Seat: FAM-202 (NS-204,205 if aided).
Left seat: FAM-302 (NS-303 if aided).

Ordinance. 15 LUU-2A/B,B/B or LUU-19 flares as required.

External Support. Approved range for illumination.

7. Defensive Tactics

a. Purpose. To train the pilot in the Core Plus Skill of employing Defensive Tactics against an air threat by combining maneuver and use of the ASE suite.

b. General

(1) Upon completion of this phase the pilot will be capable of employing defensive counter-tactics against an air threat.

(2) Use of the Rear Vision Device (RVD) and ASE suite is recommended.

(3) A DEFTAC(I) is required to fly with any non-qualified pilot or copilot.

(4) The DEFTAC qualification requirements consist of DEFTAC-462, DEFTAC-463, DEFTAC-464 and RQD-661. Upon successful completion of qualification requirements, pilots may be issued a DEFTAC qualification letter from the squadron commander and log the RQD-697 tracking code.

c. Crew Requirements. The minimum crew as defined by the NFM or NTTTP is required for flight events. An additional member to utilize the RVD is recommended.

d. Academic/Ground Training. Review the KC-130 TACMAN/NTTP, Classified TACMAN/NTTP, AFTTP 3-1 Threat Reference Guide concerning air-to-air threats. Review the KC-130 ASE, DEFTAC/ACCT, Stress & Performance Limitations and Threat Counter-tactics classes from the MAWTS-1 KC-130 Specific ASP.

e. Flight Training (3 Events, 6.0 Hours)

DEFTAC-462 2.0 1 KC-130, 1 Adversary A

Goal. Train in defensive maneuvering in relation to an air-to-air threat. This sortie shall be flown as a 1 vs. 1.

Requirement. The DEFTAC I shall brief and introduce DEFTAC briefing requirements. Practice defensive maneuvers with emphasis on hard turns, break turns, maneuvering velocity, one-circle/two-circle fights and negating tracking solutions. The flight preparation for this event shall include threat analysis, ASE and expendable integration with regard to the threat, and a detailed aircrew brief on threat reaction throughout all phases of an attack. CRM shall be emphasized to include incorporation of the RVD, aircrew lookout doctrine/scan sectors and threat call template. An event debrief with the aggressor pilot is recommended.

Performance Standard. Pilot should demonstrate a knowledge of A/A RADAR, A/A gun and IR missile defense and one-circle/two-circle considerations.

Prerequisite. RQD-621, THRX-360.

Ordinance. 140 flares, 160 chaff.

External Support. Single aggressor aircraft and approved airspace.

DEFTAC-463 2.0 1 KC-130, 2 Adversaries A

Goal. Train in defensive maneuvering in relation to an air-to-air threat. This sortie shall be flown as a 1 vs. 2.

Requirement. Practice defensive maneuvers with emphasis on hard turns, break turns, maneuvering velocity, one-circle/two-circle fights and negating tracking solutions. The flight preparation for this event shall include threat analysis, ASE and expendable integration with regard to the threat, and a detailed aircrew brief on threat reaction throughout all phases of an attack by a bogey section. CRM shall be emphasized to include incorporation of the RVD, aircrew lookout doctrine/scan sectors, threat call template and honoring the nearest threat. An event debrief with the aggressor flight lead is recommended.

Performance Standard. Pilot should demonstrate knowledge of A/A RADAR, A/A gun and IR missile defense, one-circle/two-circle considerations and honoring the nearest threat.

Prerequisite. DEFTAC-462.

Ordinance. 140 flares, 160 chaff.

External Support. Two aggressor aircraft and approved airspace.

DEFTAC-464

2.0 SC, R 1 KC-130, 1 or 2 Adversaries A

Goal. Qualify in defensive maneuvering in relation to an air-to-air threat. This sortie shall be flown as a 1 vs. 1 or 1 vs. 2.

Requirement. Practice defensive maneuvers with emphasis on hard turns, break turns, maneuvering velocity, one-circle/two-circle fights and negating tracking solutions. The pilot shall review threat analysis, ASE and expendable integration with regard to the threat, and a detailed aircrew brief on threat reaction throughout all phases of an attack. CRM shall be briefed by the pilot to include incorporation of the RVD, aircrew lookout doctrine/scan sectors, threat call template and honoring the nearest threat. An event debrief with the aggressor flight lead is recommended. RQD-661 shall be logged upon completion of this event.

Performance Standard. Pilot should demonstrate the ability to conduct defensive maneuvers while simultaneously orchestrating the crew's actions against an A/A threat.

Prerequisite. DEFTAC-463.

Ordinance. 140 flares, 160 chaff.

External Support. Single or section of aggressor aircraft and approved airspace.

8. Assault Landing Zone Operations

a. Purpose. Introduce the pilot to unaided and unimproved surface ALZs.

b. General

(1) It is recommended that the Core Basic and Core Advanced skills be flown in an unimproved ALZ environment. This stage provides for the training

of a pilot in the unique environment of an austere or expeditionary airfield. Dirt, grass, coral or any other unimproved surface requiring footprint loading analysis should be considered unimproved ALZs. This stage also introduces the pilot to unaided ALZ procedures.

(2) Emphasis in this stage is to introduce operating procedures designed to increase safety and reduce wear on the aircraft, footprint loading techniques, and airfield suitability services within the Marine Corps and DOD.

(3) Upon completion of this stage, the pilot will have an appreciation for KC-130 ALZ planning considerations and will be capable of conducting operations from an unimproved ALZ.

c. Crew Requirements. The minimum crew as defined by the NFM or NTTP is required for flight events.

d. Academic/Ground Training. Pilots should review the KC-130 TACMAN/NTTP ALZ and RGR chapters, maximum effort performance calculations in the KC-130 NFM, and the ALZ class in the MAWTS-1 KC-130 Specific ASP.

e. Flight and Simulator Training (1 Flight, 2.0 Hours)

ALZ-470 2.0 1 KC-130 A (N)

Goal. Train the pilot to conduct flight operations at unimproved ALZ.

Requirement. The initial event shall be instructed by an ANI, WTI or NSI and flown by the pilot from the left seat. The instructor shall review airfield assessment services available in the from the MWSS, and DOD. Discuss footprint loading/ground flotation determination and impacts on KC-130 operations. The pilot shall conduct the ALZ mission brief and prepare a TOLD card for the mission per the NFM. The instructor shall introduce austere airfield ground and taxi procedures, max effort takeoff and landing procedures from an unimproved surface, and review ALZ approaches. Tactical checklists should be practiced and CRM emphasized during this event. A simulated or actual COL should be conducted during this event.

Performance Standard. The pilot shall consistently land within the 500' touchdown zone, and demonstrate the situational awareness to manage crew duties on approach to an ALZ and during departure.

Prerequisite. This event may be flown concurrently with any Core Basic or Core Advanced ALZ event.

Ordinance. N/A

External Support. Standard USMC ALZ day or night panel setup utilizing AMP-1, 2 or 3 markings. MMT or MWSS EAF personnel for terminal control, or USAF Special Tactics Team (SST).

ALZ-471 2.0 SC, R 1 KC-130 A N

Goal. Train the pilot to fly unaided ALZ operations.

Requirement. Initial event shall be instructed by ANI, WTI. The pilot shall fly in the right or left seat. Instructor shall demonstrate unaided max effort takeoff and landing procedures and unaided ALZ approaches for T3Ps. Pilots in the left seat shall conduct ALZ mission brief, prepare a TOLD card for the mission per NFM, discuss unaided ALZ/EAF operating procedures, practice tactical checklists, practice unaided CRM, and conduct a minimum of 1 max effort takeoff, 4 max effort T&Gs, and 1 max effort landing.

Performance Standards. The pilot shall consistently land within the 500' touchdown zone, and demonstrate the situational awareness to manage crew duties on approach to an ALZ and during departure.

Prerequisite. ALZ-370.

Ordinance. N/A.

External Support. Standard USMC ALZ normal lighting setup utilizing AMP-1, 2 or 3 markings. MMT or MWSS EAF personnel for terminal control, or USAF Special Tactics Team (SST).

140. INSTRUCTOR TRAINING

1. Purpose. To train qualified pilots to instruct various stages within the Core Introduction, Core Basic, Core Advanced and Core Plus phases.

2. General. Pilots shall be recommended for instructor designation via Aircrew Performance Review Board (APRB). Upon recommendation, the pilot shall complete appropriate syllabus requirements and be designated by the commanding officer. Standardization shall be emphasized throughout this phase.

3. Core Skill Introduction Stage Instructor

a. Purpose. Train the pilot as a Core Skill Introduction Stage Instructor. These instructors are primarily utilized at the Fleet Replacement Squadron (FRS). Tactical squadrons may utilize Stage Instructors at the discretion of the commanding officer.

b. Flight and Simulator Event Training (15 Events, 32.0 Hours)

SFAM-500 2.0 E OFT/WST S

Goal. Train IUT as a Core Introduction phase FAM/INST Instructor.

Requirement. IUT in the right seat shall practice all FAM/INST procedures in Core Skill Advanced syllabus. IUT should demonstrate 3 engine and 2 engine landings from the right seat in order to prepare IUT to train Refresher pilots in the left seat.

Performance Standard. Per the NFM.

Prerequisite. Transport Plane Commander, APRB recommendation.

Ordinance. N/A

External Syllabus Support. CSI.

SFAM-5012.0E OFT/WT S

Goal. Train IUT as a Core Introduction phase FAM/INST Instructor.

Requirement. IUT shall demonstrate the ability to maintain a safe training environment while correcting common student errors as simulated by qualified instructor in right seat.

Performance Standard. Per the NFM.

Prerequisite. SFAM-500.

Ordinance. N/A

External Syllabus Support. CSI.

FAM-5022.0E 1 KC-130 A

Goal. Train IUT as a Core Introduction phase FAM/INST Instructor.

Requirement. IUT in the right seat shall practice all FAM/INST procedures in Core Skill Advanced syllabus. IUT should demonstrate 3 engine and 2 engine landings from the right seat in preparation to train Refresher pilots in the left seat.

Performance Standard. Per the NFM.

Prerequisite. SFAM-501.

Ordinance. N/A

External Syllabus Support. N/A

INST-5032.0E 1 KC-130 A

Goal. Train IUT as a Core Introduction phase FAM/INST Instructor.

Requirement. IUT shall demonstrate the ability to maintain a safe training environment while correcting common student errors as simulated by a qualified instructor in the right seat.

Performance Standard. Per the NFM.

Prerequisite. FAM-502.

Ordinance. N/A

External Syllabus Support. N/A

INST-5043.0E 1 KC-130 A

Goal. Qualify IUT as a Core Introduction phase FAM/INST Instructor.

Requirement. IUT in left seat shall conduct Core Skill Introduction FAM/INST training with a replacement pilot in the

right seat. The flight shall be supervised by a qualified instructor FAM/INST I. Upon completion of this event, the pilot shall log RQD-688 and may be designated a FAM/INST Stage Instructor by the commanding officer.

Performance Standard. Per the NFM.

Prerequisite. INST-503.

Ordinance. N/A

External Syllabus Support. N/A

AR-510

3.0 E 1 KC-130 A

Goal. Train IUT as a Core Introduction phase AAR Instructor.

Requirement. The IUT shall practice AAR procedures in Core Skill Advanced syllabus. The IUT should demonstrate the ability to maintain a safe training environment while correcting common student errors as simulated by qualified instructor in right seat.

Performance Standard. Per the NFM and the AAR Manual.

Prerequisite. AR-310, Transport Plane Commander, APRB recommendation.

Ordinance. N/A

External Syllabus Support. Receiver aircraft.

AR-511

3.0 E 1 KC-130 A

Goal. Qualify IUT as a Core Introduction phase AAR Instructor.

Requirement. The IUT in left seat shall conduct Core Skill Introduction/Basic AAR training with a replacement pilot in right seat. Flight shall be supervised by qualified instructor. Upon completion of this event, the pilot shall log RQD-689 and may be designated a AAR Stage Instructor by the commanding officer.

Performance Standard. Per the NFM and the AAR Manual.

Prerequisite. AR-510.

Ordinance. N/A

External Syllabus Support. Receiver aircraft.

TACNAV-512

2.0 E 1 KC-130 A

Goal. Train IUT as a Core Introduction phase TACNAV Instructor.

Requirement. The IUT shall practice TACNAV procedures in Core Skill Advanced syllabus. The IUT shall demonstrate the ability to maintain a safe training environment while

correcting common student errors as simulated by qualified instructor in right seat.

Performance Standard. Per NFM and KC-130 TACMAN/NTTP.

Prerequisite. TACNAV-322, RQD-621, Transport Plane Commander, APRB recommendation.

Ordinance. N/A

External Syllabus Support. Approved MTR.

TACNAV-513

2.0 E 1 KC-130 A

Goal. Qualify IUT as a Core Introduction phase TACNAV Instructor.

Requirement. IUT in left seat shall conduct Core Skill Introduction/Basic TACNAV training with a Replacement Pilot in the right seat. The flight shall be supervised by qualified instructor. Upon completion of this event, the pilot shall log RQD-690 and may be designated a TACNAV Stage Instructor by the commanding officer.

Performance Standard. Per the NFM and KC-130 TACMAN/NTTP.

Prerequisite. TACNAV-512.

Ordinance. N/A

External Syllabus Support. Approved MTR.

FORM-514

2.0 E 2 KC-130 A

Goal. Train IUT as a Core Introduction phase Formation Instructor.

Requirement. The IUT shall practice FORM maneuvers in Core Skill Advanced syllabus. The IUT shall demonstrate the ability to maintain a safe training environment while correcting common student errors as simulated by qualified instructor in right seat.

Performance Standard. Per the NFM and KC-130 TACMAN/NTTP.

Prerequisite. RQD-631, APRB recommendation.

Ordinance. N/A

External Syllabus Support. MOA.

FORM-515

2.0 E 2 KC-130 A

Goal. Qualify IUT as a Core Introduction phase TACNAV Instructor.

Requirement. The IUT in left seat shall conduct Core Skill Introduction/Basic FORM training with the Replacement Pilot in the right seat. Flight shall be supervised by qualified instructor. Upon completion of this event, the pilot shall

log RQD-691 and may be designated a FORM Stage Instructor by the commanding officer.

Performance Standard. Per the NFM and KC-130 TACMAN/NTTP.

Prerequisite. FORM-514.

Ordinance. N/A

External Syllabus Support. MOA.

AD-516

2.0 E 1 KC-130 A

Goal. Train IUT as a Core Introduction phase AD Instructor.

Requirement. The IUT shall practice AD procedures in Core Skill Advanced syllabus. The IUT shall demonstrate the ability to maintain a safe training environment while correcting common student errors as simulated by qualified instructor in right seat.

Performance Standard. Safely perform AD that lands within the drop zone. An actual AD of cargo or personnel is required to complete this sortie.

Prerequisite. AD-340, Transport Plane Commander, APRB recommendation.

Ordinance. N/A

External Syllabus Support. AD unit of any service for cargo rigging and DZ control.

AD-517

2.0 E 1 KC-130 A

Goal. Qualify IUT as a Core Introduction phase AD Instructor.

Requirement. The IUT in left seat shall conduct Core Skill Introduction/Basic AD training with a replacement pilot in the right seat. The flight shall be supervised by qualified instructor. Upon completion of this event, the pilot shall log RQD-692 and may be designated an AD Stage Instructor by the commanding officer.

Performance Standard. Safely perform AD that lands within the drop zone. An actual AD of cargo or personnel is required to complete this sortie.

Prerequisite. AD-516.

Ordinance. N/A

External Syllabus Support. AD unit of any service for cargo rigging and DZ control.

ALZ-518

2.0 E 1 KC-130 A

Goal. Train IUT as a Core Introduction phase ALZ Instructor.

Requirement. The IUT shall practice ALZ procedures in Core Skill Advanced syllabus. The IUT shall demonstrate the

ability to maintain a safe training environment while correcting common student errors as simulated by qualified instructor in right seat.

Performance Standard. Per the NFM and KC-130 TACMAN/NTTP.

Prerequisite. ALZ-370, Transport Plane Commander, APRB recommendation.

Ordinance. N/A

External Syllabus Support. Standard USMC ALZ day panel setup utilizing AMP-1 markings. MMT or MWSS EAF personnel for terminal control, or USAF Special Tactics Team (SST).

ALZ-519

2.0

E 1 KC-130 A

Goal. Qualify IUT as a Core Introduction phase ALZ Instructor.

Requirement. The IUT in left seat shall conduct Core Skill Introduction/Basic ALZ training with a replacement pilot in the right seat. The flight shall be supervised by a qualified instructor. Upon completion of this event, the pilot shall log RQD-693 and may be designated an ALZ Stage Instructor by the commanding officer.

Performance Standard. Per the NFM and KC-130 TACMAN.

Prerequisite. ALZ-518.

Ordinance. N/A

External Syllabus Support. Standard USMC ALZ day panel setup utilizing AMP-1 markings. MMT or MWSS EAF personnel for terminal control, or USAF Special Tactics Team (SST).

4. Core Skill T&R Instructor

a. Purpose. Train the Fleet TPC to instruct select events within the Core Basic, Core Advanced and Core Plus phases. This is a basic instructor qualification that ensures instruction is standardized within fleet units at all levels.

b. General

(1) A prospective T&R instructor shall be a TPC that the APRB and commanding officer determine has the requisite airmanship and maturity to begin pilot instruction. The TPC shall be Core Advanced phase complete prior to being recommended by the APRB.

(2) The events a T&R instructor may instruct are delineated in the individual event descriptions but are generally limited to AAR, formation, and TACNAV (non-LAT events).

(3) The T&R Instructor designation requires only 1 event. However, commanding officers may elect to apply more stringent requirements to attain designation.

c. Crew requirements. The minimum crew as defined by the NFM or NTTP is required for flight events.

d. Ground/Academic Training. The IUT shall review all directives pertinent to the safe conduct of flight to include the OPNAV 3710, Instrument Flight Manual, AIM/FAR, NFM, all tactics publications and local SOPs. The IUT shall be familiar with the T&R Program Manual and this MCO.

e. Flight and Simulator Event Training (1 Event, 3.0 Hours)

TR-520

3.0

E 1 KC-130 A (N)

Goal. Qualify IUT as a T&R Instructor.

Requirement. This event shall be flown in conjunction with a Core Basic or Core Advanced event with the IUT instructing a pilot under the supervision of an qualified ANI or WTI. The IUT shall conduct the mission brief and execute the syllabus event in accordance with the event description. Upon completion of this event, the pilot shall log RQD-694 and may be designated a T&R instructor by the commanding officer.

Performance Standard. The IUT shall be evaluated on the ability to correctly brief the flight, demonstrate and introduce maneuvers in accordance with applicable directives, correct student deficiencies, conduct proper debrief and display appropriate subject matter expertise.

Prerequisite. Transport Plane Commander, APRB recommendation.

Ordinance. N/A

External Syllabus Support. See appropriate Core Basic or Core Advanced stage description.

5. NATOPS Instructor

a. Purpose. Qualify IUT as a NATOPS Instructor/Assistant NATOPS Instructor (NI/ANI).

b. General. The purpose of this stage is to qualify the IUT as a NATOPS instructor. The NI/ANI primarily conducts annual NATOPS and Instrument evaluations as well as administering the TPC Upgrade syllabus. The IUT shall be introduced to and practice compound aircraft emergencies from the right and left seat and shall be proficient in 2-engine emergency operations. The IUT shall be instructed on proper check-ride preparation, in-flight supervision of the aircraft and pilot and post-flight administrative requirements.

c. Crew requirements. Two pilots are required for simulator events. The minimum crew as defined by the NFM or NTTP is required for flight events.

d. Ground/Academic Training. The IUT shall be familiar with all applicable OPNAV and NATOPS directives, with an emphasis on instrument and NATOPS emergency procedures.

e. Flight and Simulator Training (1/1 Events, 3.0/3.0 Hours)

SNI-590

3.0

E OFT/WST S

Goal. Prepare the IUT for the ANI/NI Qualification. Standardize maneuver instruction.

Requirement. Introduce the IUT to the skills required to correct common student errors from the right seat. Shall be instructed by either ANI or NI or a qualified WST CSI. Emphasize 3 and 2-engine aircraft approaches and landings, instructional techniques, check-ride preparation, aircraft/pilot monitoring and post-check administrative duties.

Performance Standard. Satisfactory completion of events per the NFM.

Prerequisite. RQD-685, APRB recommended.

Ordinance. N/A.

External Syllabus Support. CSI or ANI/NI.

NI-591

3.0 E 1 KC-130 A

Goal. Qualify the IUT for the ANI/NI.

Requirement. Shall be instructed by a NI/ANI with the IUT in the right seat and the instructor in the left seat. Emphasis shall be on 3 and 2-engine aircraft approaches and landings in 50%, 100% and no-flap landing configurations. The IUT shall be evaluated on instructional technique, check-ride preparation, aircraft/pilot monitoring and post-check administrative duties. A minimum of one 2-engine, no flap landing from the right seat shall be demonstrated by the IUT. Upon completion of this event, the IUT shall log the RQD-695 and may be designated a NI/ANI by the commanding officer.

Performance Standard. The IUT shall demonstrate the skills required to perform required maneuvers correctly and correct common student errors while maintaining situational awareness and safe operating conditions.

Prerequisite. RQD-685, SNI-591, APRB recommended.

Ordinance. N/A.

External Syllabus Support. ANI/NI.

6. Low Altitude Tactics Instructor (LATI)

a. Purpose. Qualify the IUT as a LATI.

b. General

(1) Completion of the Core Advanced and Core Plus LAT syllabus is a prerequisite.

(2) The preparation stage shall be supervised by the Squadron LATI. During the LATI preparation stage, the squadron LATI shall demonstrate to the prospective LATI appropriate flight brief techniques, structure and objectives, and should highlight common errors in every maneuver. There should be particular emphasis in safety and adherence to the Rules of Conduct for all portions of LAT flight. The LAT IUT build-up syllabus codes are LAT-592, 593, 594.

(3) The certification flight is LAT-595. Upon certification by MAWTS-1 or the Squadron WTI, the IUT shall log RQD-696 and may be designated a LAT I by the squadron commanding officer.

(4) Currency in LAT is not required to maintain instructor designation. However, the LATI must satisfy 15 day currency requirements in order to instruct as a LATI. In instances where a disparity exists between the MAWTS-1 Course Catalog and the T&R Manual, the MAWTS-1 Course Catalog has precedence.

c. Crew Requirements. The minimum crew as defined by the NFM or NTPP is required for flight events.

d. Ground/Academic Training. Utilize academic courseware as outlined in the KC-130 Chapter of the MAWTS-1 Course Catalog.

(1) The IUT shall review and be capable of presenting the following lectures from the LAT Academic Support Package:

(a) LAT Part I: Philosophy and Concepts.

(b) LAT Part II: LAT Considerations.

(c) KC-130 LAT Maneuvering Considerations.

(2) LATI Certification. The LATI certification may be conducted by a KC-130 WTI pilot. The following evaluation sorties are required for LATI certification.

e. Flight Event Training (4 Events, 8.0 Hours)

LAT-530 2.0 E 1 KC-130 A

Goal. Re-establish currency and begin certification for the LAT IUT. Practice flying at comfort level, terrain masking, LAT maneuvers, and proper lookout doctrine.

Requirement. The IUT shall brief, instruct and debrief a low altitude flight on a low level route or closed course. Event description and requirements are the same as for TACNAV-321 except the sortie shall be flown with the IUT in the right seat.

Performance Standard. Per NFM, KC-130 TACMAN, MAWTS-1 course catalog.

Prerequisite. RQD-621.

Ordinance. N/A

External Syllabus Support. LAT approved MTR or training area.

LAT-531 2.0 E 1 KC-130 A

Goal. Continue LATI certification preparation phase with IUT flying in left seat.

Requirement. The IUT will brief, instruct, and debrief a low altitude flight on a low level route or closed course. Event description and requirements are the same as for TACNAV-321.

Prerequisite. LAT-530.

Performance Standard. Per NFM, KC-130 TACMAN, MAWTS-1 course catalog.

Ordinance. N/A

External Syllabus Support. LAT approved MTR or training area.

LAT-532 2.0 R E 2 KC-130 A

Goal. Complete LATI certification preparation phase with IUT flying dash-2 of a section in the left seat.

Requirement. The IUT will brief, instruct, and debrief a low altitude formation flight on a low level route or closed course. Event description and requirements are the same as TACNAV-421.

Performance Standard. Per NFM, KC-130 TACMAN, MAWTS-1 course catalog.

Prerequisite. LAT-531.

Ordinance. N/A

External Syllabus Support. LAT approved MTR or training area.

LAT-533 2.0 R E 1/2 KC-130 A

Goal. Qualify IUT as a LATI.

Requirement. The IUT will brief, instruct, and debrief a low altitude tactics event from the right seat demonstrating all maneuvers required in the LAT syllabus. The IUT shall also be evaluated on IR and RADAR threat reaction considerations, conduct of LAT and threat reaction training and all applicable rules of conduct governing LAT flight. Upon completion of this event, RQD-696 shall be logged and the IUT designated a LATI by the commanding officer.

Performance Standard. Per NFM, KC-130 TACMAN/NTTP, and MAWTS-1 course catalog.

Prerequisite. LAT-532.

Ordinance. N/A

External Syllabus Support. LAT approved MTR or training area.

7. Night System Instructor

a. Purpose. Qualify the pilot as an NSI.

b. General. The T&R Program Manual and the MAWTS-1 Course Catalog are germane. Night System Qualification, and completion of all NS Core Plus events is a prerequisite. The build-up phase may be developed and supervised by the Squadron NSI. Upon certification by MAWTS-1, the RQD-698 code shall be logged and the NSI designation may be assigned by the squadron commanding officer.

- c. Crew requirements. Refer to the MAWTS-1 Course Catalog.
 - d. Ground/Academic Training. Refer to the MAWTS-1 Course Catalog.
 - e. Flight and Simulator Training. Refer to the MAWTS-1 Course Catalog.
8. Defensive Tactics Instructor (DEFTACTI).
- a. Purpose. Qualify the pilot as a DEFTACI.
 - b. General. The T&R Program Manual and the MAWTS-1 course catalog are germane. Completion of the DEFTAC syllabus and LAT I designation are prerequisites. The build-up phase may be developed and supervised by the Squadron DEFTACI. Upon certification by MAWTS-1, RQD-697 shall be logged and the DEFTACI designation will be assigned by the squadron commanding officer.
 - c. Crew requirements. Refer to the MAWTS-1 Course Catalog.
 - d. Ground/Academic Training. Refer to the MAWTS-1 Course Catalog.
 - e. Flight Training. Refer to the MAWTS-1 Course Catalog.
9. Weapons and Tactics Instructor (WTI)
- a. Purpose. Develop highly qualified pilots into effective unit tactics instructors and expose them to current Marine Corps tactical doctrine. Additionally, this stage is designed to increase knowledge and experience of the capabilities and associated tasks of the KC-130.
 - b. General. Tactics and techniques will be taught per the KC-130 Tactical Manual and the MAWTS-1 supplements. Only MAWTS-1 instructors shall instruct/qualify flights in this stage.
 - c. Flight Training. See the MAWTS-1 Course Catalog.

150. REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS (RQD)

1. General. To provide a vehicle for tracking codes associated with qualifications and designations. E-coded sorties are evaluation sorties. E-coded sorties in the 600-level phase may be logged in conjunction with any sortie that completes its stage. For example, RQD-686 may be flown in conjunction with TACNAV-224. Once the flight to attain the qualification/designation is complete, a letter from the squadron commanding officer awarding the qualification/designation shall be placed in the NATOPS and APR before that qualification/designation can be utilized.

2. TPC Preparation Stage

- a. Purpose. Qualify the pilot as a Transport Plane Commander (TPC).
- b. General. The TPC preparation syllabus is designed to prepare the pilot to command a KC-130 and crew in all aspects of flight.

(1) The Proficiency Review Flights (PRFs) (RQD-600 to RQD-602) will be flown to screen T2Ps for upgrade. Each flight should be flown with a separate evaluator. Upon successful completion of RQD-602, the T2P shall complete the TPC Preparation Simulator syllabus.

(2) The TPC Preparation simulator syllabus (SRQD-603) introduces the pilot to multiple, compound emergency scenarios and emphasizes landing the

aircraft safely under 1 and 2-engine-out situations. It also provides a comprehensive review of crucial aircraft systems and limitations. If a pilot attends USAF Aircraft Commander Qualification Course (ACQ), commanders may waive the simulator syllabus.

(3) Upon successful completion of the PRF and TPC Preparation Simulator syllabus, the TPC shall have met the prerequisites for the TPC Route Evaluation (RQD-604) and TPC NATOPS Evaluation (RQD-685).

(4) The prerequisites to begin the TPC Upgrade Syllabus are completion of Core Advanced training, currency/flight time per NFM, and the specific requirements for TPC designation per OPNAVINST 3710.7__.

c. Crew Requirements. Two pilots are required for simulator events. The minimum crew as defined by the NFM or NTTP is required for flight events.

d. Ground/Academic Training. The pilot shall be familiar with all applicable OPNAV and NATOPS directives, with an emphasis on instrument and NATOPS emergency procedures.

e. Flight and Simulator Event Training (14 Events, 46.0 Hours)

RQD-600 3.0 E 1 KC-130 A

Goal. Screen for TPC designation.

Requirement. Review engine start malfunctions, ground, normal and emergency procedures, stall series, GCA and ILS approach procedures, propeller malfunctions and emergency landings in all configurations.

Performance Standard. Per the NFM.

Prerequisite. RQD-684. APRB recommendation.

Ordinance. N/A

External Syllabus Support. N/A

RQD-601 3.0 E 1 KC-130 A (N)

Goal. Screen for TPC designation.

Requirement. Review ground fires, hydraulic malfunctions, 3-engine circling approaches, no-flap landings, and aircraft limitations. Practice engine start malfunctions, ground normal and emergency procedures, GCA and ILS approach procedures, propeller malfunctions and emergency landings in all configurations.

Performance Standard. Per the NFM.

Prerequisite. RQD-601.

Ordinance. N/A

External Syllabus Support. N/A

RQD-602 3.0 E 1 KC-130 A

Goal. Screen for TPC designation.

Requirement. Review engine and electrical malfunctions, unusual attitude recovery, and partial panel/no gyro approaches. Practice engine start malfunctions, ground, normal and emergency procedures, GCA and ILS approach procedures, propeller malfunctions and emergency landings in all configurations.

Performance Standard. Per the NFM.

Prerequisite. RQD-601.

Ordinance. N/A

External Syllabus Support. N/A

RQD-603

27.0 E OFT/WST S

Goal. TPC Upgrade Preparation Simulator Syllabus.

Requirement. This is a tracking code to identify the completion of the TPC Upgrade Preparation Simulator Syllabus. The syllabus includes 9 simulator events. See the TPC Upgrade Preparation Simulator Syllabus Guide for individual event descriptions and requirements.

Performance Standard. Per the NFM.

Prerequisite. RQD-602.

Ordinance. N/A

External Syllabus Support. CSI or ANI.

RQD-604

8.0 E 1 KC-130 A (N)

Goal. TPC NATOPS Route Check evaluation.

Requirement. This event shall be conducted on a long range overwater mission requiring the pilot to review ICAO operations, aircraft cruise and drift-down performance, overwater emergency procedures and cargo/passenger coordination. It is recommended the route evaluation be conducted during a multi-day mission to allow evaluation of the pilot's ground duties and crew handling, to include billeting, aircraft parking and servicing and diplomatic clearance coordination.

Performance Standard. Per the NFM and OPNAVINST 3710.7__.

Prerequisite. RQD-603.

Ordinance. N/A

External Syllabus Support. N/A

3. LAT Qualification (LATQ)

a. Purpose. Track LAT Qualification designation.

b. General. See course description and requirements in Core Basic and Core Advanced phase.

c. Simulator and Flight Training (0 Periods, 0.0 Hours)RQD-620 0.0Goal. Tracking code for Right Seat LAT qualification.Prerequisite. TACNAV-221.RQD-621 0.0Goal. Tracking code for LAT qualification.Prerequisite. TACNAV-322.4. Section Leader Designation

a. Purpose. Prepare for and qualify the pilot as a section leader. During the workup stage for section leader, 1 flight should be of tactical nature (section TACNAV to AD, multi-ship AR, etc). The pilot shall review section formations, multi-plane AR formations, planned and inadvertent weather penetrations and section recovery techniques. One flight should be flown at night. It is recommended that the Tactical RAC Qualification (RQD-636) be conducted in conjunction with either RQD-630 or 631.

b. Crew Requirements. The minimum crew as defined by the NFM or NTTP is required for flight events.

c. Ground Training. Review formation leader responsibilities outlined in the OPNAVINST 3710.7, KC-130 NFM, AAR Manual, and MAWTS-1 ASP air refueling courseware.

d. Flight Training (2 Flights, 6.0 Hours)RQD-630 3.0 2 KC-130 A (N)Goal. Train the pilot as a KC-130 section leader.

Requirement. This event shall be instructed by a designated section leader. This event should be flown as part of tactical mission (AAR preferred). The pilot shall conduct the formation leader brief, review formation start, taxi run-up, takeoff and recovery procedures under day, night and NVG conditions. Review proper management of all comm/nav equipment as associated with formation flight and proper formation communications procedures.

Prerequisite. RQD-685, 100 flight hours as a TPC.Performance Standard. Successfully plan, brief and lead a section formation evolution.Ordinance. N/AExternal Support Requirements. MOA or appropriate training area.RQD-631 3.0 2 KC-130 A (N)Goal. Certify the pilot as a KC-130 section leader.

Requirement. This event shall be evaluated by a designated division leader. Flight should be flown as a section. If RQD-630 did not include a tactical mission, then RQD-631 shall be flown in conjunction with a tactical mission. The pilot shall conduct the formation leader brief, review formation start, taxi run-up, takeoff and recovery procedures under day, night and NVG conditions. Review proper management of all comm/nav equipment as associated with formation flight and proper formation communications procedures. Upon completion of this event, the pilot may be designated a section leader by the commanding officer.

Performance Standard. The pilot shall demonstrate the flight leadership and maturity to successfully plan, brief and lead a section of KC-130s.

Prerequisite. FORM-630.

Ordinance. N/A

External Support Requirements. MOA or appropriate training area.

5. Division Leader Designation

a. Purpose. Prepare for and qualify the pilot as a division leader. During the workup stage for division leader, 1 flight should be a multi-plane AAR evolution. The pilot shall review multi-plane AAR formations, planned and inadvertent weather penetrations and division recovery techniques. One flight should be flown at night.

b. Crew Requirements. The minimum crew as defined by the NFM or NTPP is required for flight events.

c. Ground Training. Review formation leader responsibilities outlined in the OPNAVINST 3710.7, KC-130 NFM, AAR Manual, and MAWTS-1 ASP air refueling courseware.

d. Flight Training (2 Flights, 6.0 Hours)

<u>RQD-632</u>	<u>3.0</u>	<u>3+ KC-130 A (N)</u>
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Goal. Train the pilot as a KC-130 division leader.

Requirement. This event shall be instructed by a designated division leader. This event should be flown as part of a multi-plane AAR mission. The pilot shall conduct the formation leader brief, review formation start, taxi run-up, takeoff and recovery procedures under day, night and NVG conditions. Review proper management of all comm/nav equipment as associated with formation flight and proper formation communications procedures.

Performance Standard. Successfully plan, brief and lead a division formation evolution.

Prerequisite. RQD-631, RQD-636, 200 flight hours as a TPC.

Ordinance. N/A.

External Support Requirements. MOA or appropriate training area.

RQD-633 3.0 3+ KC-130 A (N)

Goal. Certify the pilot as a KC-130 division leader.

Requirement. This event shall be evaluated by a designated division leader. If RQD-632 did not include a tactical mission, then RQD-633 shall be flown in conjunction with a multi-plane AAR mission. The pilot shall conduct the formation leader brief, review formation start, taxi run-up, takeoff and recovery procedures under day, night and NVG conditions. Review proper management of all comm/nav equipment as associated with formation flight and proper formation communications procedures. Upon completion of this event, the pilot may be designated a section leader by the commanding officer.

Prerequisite. RQD-632.

Performance Standard. The pilot shall demonstrate the flight leadership and maturity to successfully plan, brief, and lead a division of KC-130s.

Ordinance. N/A

External Support Requirements. MOA or appropriate training area.

6. Tactical Refueling Area Commander (Tactical RAC) Designation

a. Purpose. Qualify the pilot as a Refueling Area Commander for multi-plane, static orbit air-to-air refueling operations.

b. General. A designated Tactical RAC shall be capable of commanding a KC-130 refueling cell on a static-orbit tanker track to include fuel management and control of receivers in and around the tanker cell. This qualification should be completed during the pilot's section leader training.

c. Crew Requirements. The minimum crew as defined by the NFM or NTTP is required for flight events.

d. Ground Training. Review RAC responsibilities outlined in the OPNAVINST 3710.7, KC-130 NFM, AAR Manual, and MAWTS-1 ASP air refueling courseware.

e. Flight Training (1 Flight, 2.0 Hours)

RQD-636 3.0 R,E 2 KC-130 A (N)

Goal. Tactical RAC designation.

Requirement. Brief, conduct, and control a multi-tanker AAR mission. Discuss responsibilities of Flight Leader and Refueling Area Commander on a static orbit track. Focus should be on refueling formation integrity, receiver management, and fuel management for the entire flight.

Performance Standard. Accurately brief the tanker and receiver force on all applicable procedures per the NFM and the Air Refueling Manual.

Prerequisite. RQD-631, FORMAR-333.

Ordinance. N/A

External Syllabus Support. Receiver aircraft. MOA or appropriate training area.

7. Strategic Refueling Area Commander (Strategic RAC) Qualification

a. Purpose. Qualify the TPC as a Strategic RAC for long range refueling operations.

b. General. This designation qualifies the pilot to act as RAC for extended over-water tanker missions. A detailed knowledge of both tanker and receiver fuel management, Central Altitude Reservation Facility (CARF) coordination, long-range navigation techniques, flight lead/rendezvous controller responsibilities and international flight operations is required. Commanders should select only the most skilled and experienced aircraft commanders for this qualification.

c. Crew Requirements. The minimum crew as defined by the NFM or NTTP is required for flight events.

d. Ground Training. Review Strategic RAC responsibilities outlined in the AAR Manual appendix on KC-130 long-range over-water mission planning.

e. Flight Training (1 Event, 6.0 Hours)

RQD-637 6.0 R,E 1+ KC-130 A (N)

Goal. Strategic RAC designation.

Requirement. Flight shall be evaluated by a qualified Refueling Area Commander. Brief, conduct, and control a multi-tanker extended AR mission. Discuss responsibilities of Refueling Area Commander, flight leader, Rendezvous Controller, movement control, ALTRVs, abort criteria, hose factor, contingency planning, RAC functions, rendezvous control and pathfinding. Review radio procedures, NAVAID/RADAR/TCAS procedures, tanker/receiver management and emergency procedures related to AAR.

Performance Standard. Successfully plan, brief and execute a long-range AAR mission in support of FW/TR/RW receivers deployment operations.

Prerequisite. AR-493, RQD-633. APRB recommendation.

Ordinance. N/A

External Syllabus Support. FW/TR/RW receivers, CARF.

8. DEFTAC Qualification

RQD-661 0.0

Goal. Track DEFTAC Qualification.

Prerequisite. RQD-621, DEFTAC-462, 463, 464.

9. Familiarization

RQD-680 0.0

Goal. Track Left Seat FAM Qualification.

Prerequisite. FAM-300, 301, 302.

10. Instrument

a. Purpose. Conduct annual Instrument evaluation.

b. General. The policy, requirements, and prerequisites concerning NATOPS instrument evaluations are contained in OPNAVINST 3710.7_, NFM, and the NIFM.

c. Crew Requirements. Two pilots are required for simulator events. The minimum crew as defined by the NFM or NTTP is required for flight events.

d. Ground Training/Evaluation. Ground training and evaluation shall be conducted per OPNAVINSTINST 3710.7_, NFM, and NIFM.

e. Flight Training (2 Flights, 4.0 Hours)

RQD-681 2.0 SC,R E KC-130 S/A (N)

Goal. Conduct a standard instrument flight evaluation.

Requirement. Designate pilot per OPNAVINST 3710.7_, NFM, and the IFM.

Performance Standard. Per OPNAVINST 3710.7_, NFM, and the IFM.

Prerequisite. Minimum experience per OPNAVINST 3710.7_.

External Syllabus Support. N/A.

RQD-682 2.0 SC,R E KC-130 S/A (N)

Goal. Conduct a special instrument flight evaluation.

Requirement. Per OPNAVINST 3710.7_, NFM, and the NIFM.

Performance Standard. Per OPNAVINST 3710.7_, NFM, and the NIFM.

Prerequisite. Minimum experience per OPNAVINST 3710.7.

External Syllabus Support. N/A.

11. NATOPS

a. Purpose. Qualify pilot as T3P, T2P.

b. General

(1) The T3P NATOPS evaluation shall be flown in conjunction with CK-190. A designated T3P may begin the Core Basic and Core advanced phases of instruction.

(2) The T2P NATOPS evaluation may be conducted when the T3P has completed the Core Basic phase and should be completed in the right seat.

c. Crew Requirements. Two pilots are required for simulator events. The minimum crew as defined by the NFM or NTTP is required for flight events.

d. Ground Training/Evaluation. Open and closed book NATOPS examinations and the specific requirements for T3P designation per OPNAVINST 3710.7__.

e. Flight Training (3 Flights, 6.0 Hours)

RQD-683 0.0 SC,R,E KC-130 A/S (N)

Goal. T3P NATOPS evaluation flight tracking code.

Prerequisite. CK-190.

RQD-684 2.0 SC,R,E KC-130 A/S (N)

Goal. Qualify as a Transport Second Pilot (T2P).

Requirement. The T2P check shall be instructed by an ANI/NI and shall be conducted with the pilot in the right seat. Emphasize right seat copilot duties to include comm/nav management, voice procedures, situational awareness and NATOPS/Instrument procedures. This sortie should be flown in conjunction with a tactical mission. For pilots who are already designated T2P, this event may be flown in the left seat.

Performance Standard. The pilot shall perform copilot duties per the NFM and TACMAN/NTTP.

Prerequisite. Core Basic phase complete, APRB recommendation.

RQD-685 2.0 SC,R,E 1 KC-130 A/S (N)

Goal. TPC NATOPS evaluation.

Requirement. Complete the TPC NATOPS evaluation per the NFM. A pilot's initial TPC NATOPS check shall be flown in the aircraft.

Performance Standard. Per the NFM and OPNAVINST 3710.7__.

Prerequisite. RQD-604.

Ordinance. N/A

External Syllabus Support. N/A

12. Night Systems Qualification (NSQ)RQD-686 0.0Goal. Track NS Qualification.Prerequisite. SNS-203, NS-204, NS-205, TACNAV-223, TACNAV-224.13. Post Maintenance Check Flight Pilot

- a. Purpose. Qualify the TPC as a post maintenance check pilot.
- b. Crew Requirements. NATOPS minimum crew.
- c. Ground/Academic Training. Functional Check Flight Examination.
- d. Flight Training (1 Flight, 2.0 Hours)

RQD-687 2.0 1 KC-130 AGoal. Qualify the pilot as a PMCF pilot.Requirement. The flight shall consist of an "A" profile functional check flight and be instructed by a qualified and proficient FCF pilot. For tracking purposes, copilots may also log this code.Performance Standard. Satisfactorily execute procedures per the NFM, OPNAVINST 3710.7__, and OPNNAVINST 4790.2__.14. Instructor Tracking Codes

- a. Purpose. Provide tracking codes for Instructor Designations.

RQD-688 0.0Goal. Track FAM/INST Stage Instructor Designation.Prerequisite. FAM-504.RQD-689 0.0Goal. Track AAR Stage Instructor Designation.Prerequisite. AR-511.RQD-690 0.0Goal. Track TACNAV Stage Instructor Designation.Prerequisite. TACNAV-513.RQD-691 0.0Goal. Track FORM Stage Instructor Designation.Prerequisite. FORM-515.

- RQD-692 0.0
Goal. Track AD Stage Instructor Designation.
Prerequisite. AD-517.
- RQD-693 0.0
Goal. Track ALZ Stage Instructor Designation.
Prerequisite. ALZ-519.
- RQD-694 0.0
Goal. Track T&R Instructor Designation.
Prerequisite. NI-590.
- RQD-695 0.0
Goal. Track NATOPS Instructor Designation.
Prerequisite. NI-591.
- RQD-696 0.0
Goal. Track LAT Instructor Designation.
Prerequisite. LAT-533.
- RQD-697 0.0
Goal. Track DEFTAC Instructor Designation.
Prerequisite. See MAWTS-1 Course Catalog; DEFTAC-543.
- RQD-698 0.0
Goal. Track Night Systems Instructor Designation.
Prerequisite. See MAWTS-1 Course Catalog; NSI-553.
- RQD-699 0.0
Goal. Track Weapons and Tactics Instructor Designation.
Prerequisite. See MAWTS-1 Course Catalog; WTI-592.

160. EXPENDABLE ORDNANCE REQUIREMENTS

BASIC/TRANSITION/CONVERSION/REFRESHER

ORDNANCE	100 SERIES	200 SERIES	300 SERIES	400 SERIES	IUT	ANNUAL
Chaff	N/A	N/A	5000	600	600	6200
Flare	N/A	5000	5000	600	600	11200
LUU-2A/B, B/B, LUU-19	N/A	N/A	N/A	150	N/A	150

161. SYLLABUS MATRIX

CORE SKILL INTRODUCTION

STAGE	CODE	HRS	SIM HRS	REFLT	CRP	SIM CRP	SC	R	COND	REMARKS
SFAM	001		4.0	*		.5				
	002		4.0	*		.5				
	003		4.0	*		.5				
	004		4.0	*		.5				
	005		4.0	*		1.0	X	X		
	006		4.0	*		.5				
	007		4.0	*		.5	X			
SINST	008		4.0	*		.5	X			
	009		4.0	*		.5	X			
	010		4.0	*		.5	X			
	011		4.0	*		.5	X			
	012		4.0	*		.5	X	X		
	013		4.0	*		.5	X	X		
	014		4.0	*		1.0	X	X		
SPMFC	016		2.0	*		.5				
FAM	100	3.0		*	1.0					
INST	101	3.0		*	1.0		X	X		
	102	3.0		*	1.0				(N)	
	103	3.0		*	1.0		X	X	(N)	
	104	3.0		*	1.0				(N)	
	105	3.0		*	1.0		X	X		
	106	3.0		*	1.0					
	107	3.0		*	1.0		X	X		
	108	3.0		*	1.0				(N)	
	109	3.0		*	2.0		X	X	(N)	
SAR	015		4.0	*		.5				
AR	110	3.0		*	1.0					
	111	3.0		*	1.0				(N)	
	112	3.0		*	2.0				(N)	
TACNAV	120	2.0		*	2.0					
FORM	130	2.0		*	1.0					2 A/C
	131	2.0		*	2.0					2 A/C
LRNAV	150	8.0		*	1.0				(N)	
	151	8.0		*	1.0				(N)	
CK	190	3.0		365	4.0		X	X	(N)	E-CODED
CNATRA					25.0					
TOTAL	35	64.0	62.0		26.0	9.0				
100					35.0					

CORE SKILL BASIC

STAGE	CODE	HRS	SIM HRS	REFLT	CRP	SIM CRP	SC	R	COND	REMARKS
SFAM	200		3.0	*		.5	X			
FAM	201	2.0		365	.5		X			
	202	2.0		365	.5		X	X	N	UNAIDED
SNS	203		3.0	*		.5	X	X	NS	
NS	204	2.0		365	.5		X		NS	HLL
	205	2.0		180	.5		X	X	NS	LLL
AR	210	4.0		365	1.0					
	211	4.0		365	.5		X		N (NS)	NVG OPT
	212	3.0		180	.5					DAY
	213	3.0		180	.5		X		NS	HLL OR LLL
TACNAV	220	2.0		365	.5					
	221	2.0		180	.5		X			R/S LAT
STACNAV	222		2.0	*		.5	X		NS	
TACNAV	223	2.0		365	.5				NS	HLL
	224	2.0		180	1.0		X		NS	LLL
SFORM	230		2.0	*		.5				
FORM	231	2.0		365	.5					
	232	2.0		365	.5		X		NS	HLL OR LLL
SAD	240		2.0	*		.5				
AD	241	2.0		365	.5					
	242	2.0		365	.5		X		NS	HLL OR LLL
LRNAV	250	8.0		365	.5		X		(N)	
STHRXI	260		2.0	*		.5	X	X		
THRXI	261	2.0		365	.5		X		(N) (NS)	IR THREAT
SALZ	270		3.0	*		.5	X			
ALZ	271	3.0		180	.5		X			
	272	3.0		180	.5		X		NS	HLL OR LLL
RGR	274	2.0		365	.5		X	X	(N) (NS)	
TOTAL 200	28	40.0	17.0		11.5		3.5			
					15.0					

CORE SKILL ADVANCED

STAGE	CODE	HRS	SIM HRS	REFLT	CRP	SIM CRP	SC	R	COND	REMARKS
SFAM	300		3.0	*		.5	X			
FAM	301	2.0		365	.5		X	X		
	302	2.0		365	.5		X	X	N	UNAIDED
NS	303	2.0		180	1.0		X		NS	HLL
AR	311	3.0		365	1.0		X	X	(N) (NS)	NVG OPT
	312	3.0		180	1.0			X		RWAR
	313	3.0		180	1.0				NS	HLL OR LLL
TACNAV	320	2.0		365	.5		X			LLNAV
	321	2.0		180	1.0		X			LAT
	322	2.0		180	1.0		X	X		LAT QUAL
	323	2.0		365	1.0		X		NS	HLL
	324	2.0		180	1.0		X	X	NS	LLL
FORM	330	2.0		365	1.0		X	X		2AC
	331	2.0		365	1.0				NS	2AC, HLL/L LL
	332	4.0		365	1.0				(N) (NS)	DIV, NVG OPT
FORMAR	333	4.0		365	1.0				(N) (NS)	AAR, NVG OPT
AD	340	2.0		365	.5		X	X		
	341	2.0		365	1.0		X		NS	HLL OR LLL
STHRXR	360		3.0	*		.5	X			
THR XR	361	2.0		365	1.0		X	X		RADAR THREAT
ALZ	370	2.0		180	1.0		X	X		
	371	2.0		180	1.0		X		NS	HLL
	372	2.0		180	1.0		X		NS	LLL
TOTAL 300	23	46.0	6.0		19.0	1.0				
					20.0					

CORE PLUS

STAGE	CODE	HRS	SIM HRS	REFLT	CRP	SIM CRP	SC	R	COND	REMARKS
AR	413	3.0		365	.5		X		N	UNAIDED RWAR
	493	6.0		730	.5				(N)	LRAR
TACNAV	420	2.0		365	.5					SEC LLNAV
	421	2.0		180	.2					SECTION LAT
	422	2.0		365	.3		X		N	UNAIDED LLNAV
	423	2.0		180	.5		X	X	NS	NVG SEC LLNAV
FORM	430	2.0		180	.5				N	UNAIDED
AD	440	2.0		365	.5		X		N	UNAIDED
	442	2.0		365	.1				(N) (NS)	HIGH ALT AD
	444	2.0		*	.1				N (NS)	NVG OPT, BI
DEFTAC	462	2.0		180	.1					1V1
	463	2.0		180	.1					1V2
	464	2.0		180	.3		X	X		DEFTAC QUAL
ALZ	470	2.0		180	.3				(N)	UNIMPROVED
	471	2.0		180	.5		X	X	N	UNAIDED
TOTAL	15	35.0	0.0		5.0					

INSTRUCTOR TRAINING

STAGE	CODE	HRS	SIM HRS	NOTES All events are E coded.
SFAM	500		2.0	FAM/INST Stage Instructor work-up
	501		2.0	FAM/INST Stage Instructor work-up
FAM	502	2.0		FAM/INST Stage Instructor work-up
INST	503	2.0		FAM/INST Stage Instructor work-up
	504	3.0		FAM/INST Stage Instructor Qualification
AR	510	3.0		AAR Stage Instructor work-up
	511	3.0		AAR Stage Instructor Qualification
TACNAV	512	2.0		TACNAV Stage Instructor work-up
	513	2.0		TACNAV Stage Instructor Qualification
FORM	514	2.0		FORM Stage Instructor work-up
	515	2.0		FORM Stage Instructor Qualification
AD	516	2.0		AD Stage Instructor work-up
	517	2.0		AD Stage Instructor Qualification
ALZ	518	2.0		ALZ Stage Instructor work-up
	519	2.0		ALZ Stage Instructor Qualification
TR	520	3.0		T&R Instructor Qualification
LATI	530	2.0		LAT Instructor work-up, right seat
	531	2.0		LAT Instructor work-up, left seat
	532	2.0		LAT Instructor work-up, dash 2, Refresher
	533	2.0		LAT Instructor Qualification, Refresher
DEFTACI	540	2.0		See MAWTS-1 Course Catalog
	541	2.0		
	542	2.0		
	543	2.0		
NSI	550	2.0		See MAWTS-1 Course Catalog
	551	2.0		
	552	2.0		
	553	2.0		
NATOPS	590		3.0	NATOPS/Asst NATOPS Instructor work-up
	591	3.0		NATOPS/Asst NATOPS Instructor Qualification
WTI	592			See MAWTS-1 Course Catalog

REQUIREMENTS, QUALIFICATIONS, AND DESIGNATIONS

STAGE	CODE	HRS	TRACK	A/C OR SIM	NOTES - All events E coded
RQD	600	3.0		A	PROFICIENCY REVIEW FLIGHT
RQD	601	3.0		A	PROFICIENCY REVIEW FLIGHT
RQD	602	3.0		A	PROFICIENCY REVIEW FLIGHT
RQD	603	27.0	X	S	TPC PREPARATION SYLLABUS
RQD	604	8.0		A	NATOPS ROUTE EVALUATION
RQD	620		X		RIGHT SEAT LAT QUALIFICATION
RQD	621		X		LAT QUALIFICATION
RQD	630	3.0		A	SECTION LEADER PRACTICE
RQD	631	3.0		A	SECTION LEADER QUALIFICATION
RQD	632	3.0		A	DIVISION LEADER PRACTICE
RQD	633	3.0		A	DIVISION LEADER QUALIFICATION
RQD	636	3.0		A	TACTICAL REFUELING AREA COMMANDER, R-CODED
RQD	637	6.0		A	STRATEGIC REFUELING AREA COMMANDER, R-CODED
RQD	661		X		DEFTAC QUALIFICATION
RQD	680		X		LEFT SEAT QUALIFICATION
RQD	681	2.0		S/A	STANDARD INSTRUMENT REFLY 365 SC R
RQD	682	2.0		S/A	SPECIAL INSTRUMENT REFLY 365 SC R
RQD	683		X		TRANSPORT THIRD PILOT (T3P) REFLY 365 SC R
RQD	684	2.0		A/S	TRANSPORT SECOND PILOT (T2P) REFLY 365 SC R
RQD	685	2.0		A/S	TRANSPORT PLANE COMMANDER (TPC) REFLY 365 SC R
RQD	686		X		NIGHT SYSTEMS QUALIFICATION (NSQ)
RQD	687	2.0		A	PMCF PILOT
RQD	688		X		FAMILIARIZATION/INSTRUMENT INSTRUCTOR
RQD	689		X		AIR-TO-AIR REFUELING INSTRUCTOR
RQD	690		X		TACTICAL NAVIGATION INSTRUCTOR
RQD	691		X		FORMATION INSTRUCTOR
RQD	692		X		AIR DELIVERY INSTRUCTOR
RQD	693		X		ASSAULT LANDING ZONE INSTRUCTOR
RQD	694		X		T&R INSTRUCTOR
RQD	695		X		NATOPS INSTRUCTOR
RQD	696		X		LOW ALTITUDE TACTICS INSTRUCTOR
RQD	697		X		DEFTAC INSTRUCTOR
RQD	698		X		NIGHT SYSTEMS INSTRUCTOR
RQD	699		X		WEAPONS AND TACTICS INSTRUCTOR

162. T&R CHAINING TABLES. Event chaining allows for the completion of more complex and/or advanced events using the same skills to update proficiency status of events. Only events in a sequence entailing demonstration of equivalent skills shall be chained.

a. When a T&R event is logged, the proficiency dates of other T&R events (usually lower in number) may be updated. The T&R code that is logged is known as the "chaining code," and the updated codes are "chained codes." Chained codes are not always updated when a chaining code is logged.

b. Conditional Chaining. The following environmental conditions further specify which T&R codes are chain-updated.

(1) Night Optional. Chained codes annotated with parentheses around them, e.g. (200), are only chain-updated if the chaining code is flown at night.

(2) Night Systems Optional. Chained codes annotated with parentheses and NS after them, e.g. (200 NS), are only chain-updated if the chaining code is flown using night systems.

(3) Light Level Optional. Chained codes annotated with parentheses and HLL after them, e.g. (200 HLL), are only chain-updated if the chaining code is flown using night systems during a high light level period. Chained codes annotated with parentheses and LLL after them, e.g. (200 LLL), are only chain-updated if the chaining code is flown using night systems during a low light level period.

c. Syllabus Event Conversion Matrix. The matrix is used to convert Stage and Training Code events from the previous KC-130FRT T&R Manual to the Stage and Training Codes contained within this Manual. The automated flight scheduling tool, Squadron Assistance Risk Assessment (SARA), will automatically convert and update the previous Stage and Training Codes contained under the Old Primary column to the New Stage and Training Codes. There is a possibility that more than one old Stage and Training Code could map to the New Stage and Training Codes. Therefore, the column "Old Secondary" was established. Due to software shortcomings in the SARA program, SARA can only map one old code to the new code. It is the responsibility of the local SARA administrator to manually map "Old Secondary" codes to the new Stage and Training Codes.

EVENT UPDATE CHAINING

STAGE	FLIGHT	FLIGHT UPDATED
SFAM	200	
FAM	201	
FAM	202	201
SNS	203	
NS	204	201
NS	205	204, 201
AR	210	201
AR	211	210, 201, (204 NS), (205 LLL), (202 NITE)
AR	212	201
AR	213	212, 201, (204 NS), (205 LLL)
TACNAV	220	201
TACNAV	221	220, 201
STACNAV	222	
TACNAV	223	220, 204, 201
TACNAV	224	220, 205, 201
SFORM	230	
FORM	231	201
FORM	232	231, 201, (204 NS), (205 LLL)
SAD	240	
AD	241	201
AD	242	241, 201, (204 NS), (205 LLL)
LRNAV	250	201, (202 NITE)
STHRXI	260	
THRXI	261	
SALZ	270	
ALZ	271	201
ALZ	272	271, 201, (204 NS), (205 LLL)
RGR	274	
SFAM	300	
FAM	301	201
FAM	302	301, 202, 201
NS	303	301, 201, (204 NS), (205 LLL)
AR	311	301, 210, 201, (303, 211, 204 NS), (205 LLL), (302, 211, 202 NITE)
AR	312	301, 212, 201
AR	313	312, 303, 301, 213, 212, 201, (204 NS), (205 LLL)
TACNAV	320	301, 220, 201
TACNAV	321	320, 301, 221, 220, 201
TACNAV	322	321, 320, 301, 221, 220, 201
TACNAV	323	320, 303, 301, 223, 220, 204, 201
TACNAV	324	323, 320, 303, 301, 224, 220, 205, 201
FORM	330	301, 231, 201
FORM	331	330, 303, 301, 201, (232, 231 204 NS), (205 LLL)
FORM	332	330, 301, 231, 201, (331, 303, 232, 204 NS), (205 LLL)
FORM	333	330, 301, 231, 201, (331, 303, 232, 204 NS), (205 LLL), (332 DIV)
AD	340	301, 241, 201
AD	341	340, 303, 301, 242, 241, 201, (204 NS), (205 LLL)
STHRXR	360	
THRXR	361	360, 261
ALZ	370	301, 271, 201
ALZ	371	370, 303, 301, 272, 271, 204, 201
ALZ	372	371, 370, 303, 301, 272, 271, 205, 201
AR	413	313, 312, 213, 212
AR	493	250, 301, 201, (DIV/SEC/RW/FW CODES MUST ALSO BE LOGGED)

TACNAV	420	330, 320, 301, 220, 201
TACNAV	421	420, 330, 322, 321, 320, 301, 231, 221, 201
TACNAV	422	324, 323, 320, 301, 220, 201
TACNAV	423	420, 331, 320, 220, 301, 201 (323, 303, 224, 204 NS), (324, 205 LLL)
FORM	430	331, 330, 232, 231, 302, 301, 202, 201, (322 DIV)
AD	440	341, 340, 301, 242, 241, 202, 201
AD	442	
AD	444	
DEFTAC	462	
DEFTAC	463	462, 301, 201
DEFTAC	464	463, 462, 301, 201
ALZ	470	370, 301, 271, 201, (371, 303, 272, 204 NS), (372, 205 LLL), (471 NITE)
ALZ	471	370, 301, 271, 201, (371, 303, 272, 204 NS), (372, 205 LLL), (471 NITE)
RQD	682	681
	684	683
	685	683, 684

Syllabus Event Conversion Matrix		
STAGE AND TRAINING CODE - NEW	STAGE AND TRAINING CODE - OLD PRIMARY	STAGE AND TRAINING CODE - OLD SECONDARY
SFAM-001	SFAM-001	
SFAM-002	SFAM-002	
SFAM-003	SFAM-003	
SFAM-004	SFAM-004	
SFAM-005	SFAM-005	
SFAM-006	SFAM-006	
SFAM-007	SFAM-007	
SINST-008	SINST-008	
SINST-009	SINST-009	
SINST-010	SINST-010	
SINST-011	SINST-011	
SINST-012	SINST-012	
SINST-013	SINST-013	
SINST-014	SINST-015	
SPMCF-016	SPMCP-019	
FAM-100	FAM-100	
INST-101	INST-101	
INST-102	INST-102	
INST-103	INST-103	
INST-104	INST-104	
INST-105	INST-105	
INST-106	INST-106	
INST-107	INST-107	
INST-108	INST-108	
INST-109	INST-109	
SAR-015	SAR-016	
AR-110	AR-110	
AR-111	AR-112	
AR-112	AAR-113	
TACNAV-120	LLNAV-120	
FORM-130	FORM-130	
FORM-131	FORM-131	
LRNAV-150	LRNAV-150	
LRNAV-151	LRNAV-151	
CK-190	CK-190	

STAGE AND TRAINING CODE - NEW	STAGE AND TRAINING CODE - OLD PRIMARY	STAGE AND TRAINING CODE - OLD SECONDARY
SFAM-200	SFAM-200	
FAM-201	FAM-200	
FAM-202	FAM-201	
SNS-203	SNVG-601	602
NS-204	NVG-601	
NS-205	NVG-601	
AR-210	AR-210	
AR-211	NVG-211	610
AR-212	AR-212	
AR-213	NVG-611	
TACNAV-220	LLNAV-220	
TACNAV-221	LAT-420	
STACNAV-222		
TACNAV-223	NVG-620	
TACNAV-224	NVG-621	
SFORM-230	SFORM-230	
FORM-231	FORM-230	
FORM-232	NVG-630	
SAD-240	SAD-240	
AD-241	AD-240	241, 340
AD-242	NVG-640	
LRNAV-250	LRNAV-251	
STHRXI-260	SASE-360	460
THRXI-261	ASE-360	660
SALZ-270	STLZ-270	
ALZ-271	TLZ-270	
ALZ-272	NVG-670	671
RGR-274	RGR-273	274
SFAM-300	SFAM-200	
FAM-301	FAM-200	
FAM-302	FAM-201	
NS-303	NVG-601	
AR-311	NVG-211	610
AR-312	AR-212	333
AR-313	NVG-611	
TACNAV-320	LLNAV-220	
TACNAV-321	LAT-421	
TACNAV-322	LAT-422	
TACNAV-323	NVG-620	
TACNAV-324	NVG-621	
FORM-330	FROM-230	
FORM-331	NVG-630	
FORM-332	FORM-233	234, 332
FORMAR-333	AR-312	
AD-340	AD-240	241, 340, 343
AD-341	NVG-640	
STHRXR-360	SASE-360	460
THRXR-361	ASE-360	660
ALZ-370	TLZ-270	
ALZ-371	NVG-670	
ALZ-372	NVG-672	

STAGE AND TRAINING CODE - NEW	STAGE AND TRAINING CODE - OLD PRIMARY	STAGE AND TRAINING CODE - OLD SECONDARY
AR-413	AR-213	
AR-493		
TACNAV-420	LLFORM-330	
TACNAV-421	LAT-422	
TACNAV-422	LLNAV-221	
TACNAV-423	LLFORM-231	
FORM-430	FORM-231	232,331
AD-440	AD-341	
AD-442	AD-342	
AD-444	AD-344	
DEFTAC-462	DEFTAC-462	
DEFTAC-463	DEFTAC-463	
DEFTAC-464	DEFTAC-463	
ALZ-470	ALZ-370	672
ALZ-471	TLZ-271	371
SFAM-500	SFAM-500	
SFAM-501	SFAM-500	
FAM-502	FAM-500	
INST-503	INST-501	
INST-504	INST-502	
AR-510	AR-510	
AR-511	AR-511	
TACNAV-512	NAV-520	
TACNAV-513	NAV-521	
FORM-514	FORM-530	
FORM-515	FORM-531	
AD-516	AD-540	
AD-517	AD-541	
ALZ-518	TLZ-570	
ALZ-519	TLZ-571	
TR-520		
LATI-530	LAT-532	
LATI-531	LAT-533	
LATI-532	LAT-534	
LATI-533	LAT-591	
DEFTACI-540	DEFTAC-592	
DEFTACI-541	DEFTAC-592	
DEFTACI-542	DEFTAC-592	
DEFTACI-543	DEFTAC-592	
NSI-550	NVG-593	
NSI-551	NVG-593	
NSI-552	NVG-593	
NSI-553	NVG-593	
NATOPS-590	NI-590	
NATOPS-591	NI-590	
WTI-592	WTI-594	

STAGE AND TRAINING CODE - NEW	STAGE AND TRAINING CODE - OLD PRIMARY	STAGE AND TRAINING CODE - OLD SECONDARY
RQD-600	TPC-390	
RQD-601	TPC-391	
RQD-602	TPC-392	
RQD-603	STPC-398	
RQD-604	TPC-393	
RQD-620	LAT-420	
RQD-621	LAT-421	
RQD-630	FORM-395	
RQD-631	FORM-395	
RQD-632	FORM-396	
RQD-633	FORM-396	
RQD-636		
RQD-637	RAC-493	
RQD-661	DEFTAC-463	
RQD-680	FAM-201	
RQD-681	INST-690	
RQD-682	INST-691	
RQD-683	CH-190	
RQD-684	CH-290	
RQD-685	TPC-394	
RQD-686	NVG-602	
RQD-687	FCF-600	
RQD-688	INST-502	
RQD-689	AR-511	
RQD-690	NAV-521	
RQD-691	FROM-531	
RQD-692	AD-541	
RQD-693	TLZ-571	
RQD-694		
RQD-695	NATOPS-590	
RQD-696	LAT-591	
RQD-697	DEFTAC-592	
RQD-698	NVG-593	
RQD-699	WTI-594	

T&R MANUAL, KC-130FRT

CHAPTER 2

KC-130FRT FLIGHT ENGINEER (FE)

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CHAPTER 2

KC-130FRT FE

200. MARINE AERIAL REFUELING SQUADRON (KC-130) UNIT CORE COMPETENCY

1. Background. Marine Aviation plays a crucial role in the MAGTF's ability to conduct Maneuver Warfare. The ultimate goal of Marine Aviation is to attain the highest possible combat readiness to support Expeditionary Maneuver Warfare while at the same time preserving and conserving our Marines and equipment. Embedded within our combat readiness is the ability to rapidly, effectively, and efficiently deploy on short notice and the ability to quickly and effectively plan for crises and/or contingency operations thereby ensuring Marine Aviation remains ready for combat when and where the need arises. The KC-130FRT T&R Manual represents the collaborative effort of KC-130FRT Subject Matter Experts who designed training standards to maximize the full combat capabilities of the KC-130FRT and its crew. These standards, intrinsic in the core competency section, describe and define unit capabilities and requirements necessary to maintain like-squadron proficiency in core skills and combat leadership. Training events are based on specific requirements and performance standards to ensure aircrew maintain a common base of training and depth of combat capabilities. Together, the T&R comprises a building block approach to ensure that trained aircrews remain ready, relevant, and fully capable of supporting the MAGTF commander.

2. VMGR Mission. Support the MAGTF Commander by providing aerial refueling and assault support, day or night under all weather conditions during expeditionary, joint, or combined operations.

3. Mission Essential Task List (METL)

- a. (UJTL TA 1.1.1) Conduct Tactical Airlift
 - Conduct assault support transport.
- b. (UJTL TA 1.1.4) Conduct Sea and Air Deployment Operations
 - Maintain the capability to deploy and operate from advanced bases, expeditionary airfields and forward operating bases.
 - Perform organizational maintenance on assigned aircraft.
- c. (UJTL TA 1.2.2) Conduct Airborne Operations
 - Provide air delivered assault support transport of combat troops, equipment and supplies.
 - Provide support for casualty evacuation operations.
 - Maintain self-defense capability from ground-to-air and air-to-air threats.
- d. (UJTL TA 4.2) Distribute Supplies and Provide Transport Services
 - Conduct aerial re-supply.
 - Provide support for mobile Forward Arming and Refueling Points (FARPS).
 - Provide support for Rapid Ground Refueling (RGR) of aircraft and vehicles.
- e. (UJTL TA 4.2.3) Conduct Air Refueling
 - Provide Tactical and Long Range Aerial Refueling.

- f. (UJTL TA 5) Exercise Command and Control
 - Provide Airborne Platform for the Airborne DASC Command Post.
- g. (UJTL TA 6.2) Conduct Joint Personnel Recovery
 - Conduct Tactical Recovery of Aircraft and Personnel (TRAP) operations.
 - Augment local Search and Rescue (SAR) assets
- h. (UJTL TA 6.4) Conduct Noncombatant Evacuation
 - Provide support for evacuation operations.

4. Table of Organization. Refer to Table of Organization 8820 and 8821 managed by Total Force Structure, MCCDC, for current authorized organizational structure and personnel strength for KC-130F/R/T units. As of this publication date, KC-130F/R/T units are authorized:

Squadron

12 Aircraft
 42 Pilots [26 TPC/16 CP (T2P or T3P)]
 23 Navigators
 25 FEs
 24 Loadmasters
 24 Flight Mechanics

Detachment

6 Aircraft
 19 Pilots [11 TPC/8 CP (T2P or T3P)]
 11 Navigators
 12 FEs
 12 Loadmasters
 12 Flight Mechanics

5. Core Capability. A core capable squadron is able to sustain 9 sorties on a daily basis during contingency/combat operations. The above sortie rates are based on 3.0 hour average sortie duration and assumes \geq 70 percent FMC aircraft and \geq 90 percent T/O aircrew on hand. If unit FMC aircraft < 70 percent or T/O aircrew < 90 percent, core capability will be degraded by a like percentage. A core capable squadron is able to accomplish all tasks designated in the unit METL from a main or expeditionary base.

6. METL/Core Skill Matrix. KC-130F/R/T core skills directly support the METL as follows:

METL	KC-130FRT CORE SKILL									CORE PLUS	
	A R	DEFTAC (G)	LLNAV	L A T	FORM	R G R	LRNAV	T L Z	NS	AD	DEFTAC (A)
a. Conduct Air Refueling	X	X			X		X		X		X
b. Distribute Supplies and Provide Transport Services		X				X	X	X	X	X	X
c. Conduct Tactical Airlift		X	X	X			X	X	X	X	X
d. Conduct Sea and Air Deployment Operations		X				X	X	X	X	X	X
e. Conduct Airborne Operations		X	X	X			X		X	X	X
g. Exercise Command and Control		X					X		X		X
h. Conduct Joint Personnel Recovery	X	X	X	X		X	X	X	X		X
i. Conduct Noncombatant Evacuation	X	X	X	X	X	X	X	X	X		X

7. KC-130F/R/T Core Model Minimum Requirements. Squadron core competency reflects the minimum level of competency a squadron must achieve to perform its core capability. Squadron core competency is measured in terms of minimum Core Skill Proficiency (CSP) and minimum numbers of flight leaders per paragraphs a. and b. below:

a. Minimum Unit CSP Requirements. As a minimum, in order to be considered Core Competent, a unit must possess the following numbers of crews who are proficient in each core skill (Unit CSP). In order to be considered proficient in a core skill (individual CSP), a crewmember must attain and maintain proficiency in core skill events, as delineated in paragraphs (1) and (2) below.

* NOTE: DEFTAC is a core plus skill. Proficiency in XXX is not required to obtain unit CSP and will not contribute to unit T-level readiness. Below are KC-130 community recommended unit/individual CSP standards for XXX.

KC-130 Unit CSP Requirements							
CORE SKILL *CORE PLUS	Pilot	Co-pilot	TSO	FE	Loadmaster	Flight Mechanic	Crews
AR	14	14	14	14	14	14	14
TACNAV	9	9	9	9	9	9	9
FORM	8	8		8			8
LRNAV	12	12	12	12	12	12	12
THR(X) (I)	6	6	6	6	6	6	6
THR(X) (R)	4	4	4	4			4
ALZ	9	9	9	9	9	9	9
RGR	6	6		6	6	6	6
NSQ	9	9	9	9	9	9	9
AD	4	4	4	4	8	4	4
CORE SKILL *CORE PLUS							
DEFTAC	2/2		2	2	2	2	2

KC-130 Unit CSP Requirements Detachment							
CORE SKILL *CORE PLUS	Pilot	Co-Pilot	TSO	FE	Loadmaster	Flight Mechanic	Crews
AR	7	7	7	7	7	7	7
TACNAV	5	5	5	5	5	5	5
FORM	4	4	4	4	4	4	4
LRNAV	6	6	6	6	6	6	6
THR(X) (I)	5	5	5	5	5	5	5
THR(X) (R)							
ALZ	5	5	5	5	5	5	5
RGR	3	3	3	3	3	3	3
NSQ	5	5	5	5	5	5	5
AD	2	2	2	2	4	2	2
CORE SKILL *CORE PLUS							
DEFTAC (A)	4		2	2	2	2	2

(1) Events Required to Attain Individual CSP. To initially attain CSP, a crewmember must successfully complete all of the T&R events listed in the chart below for that core skill:

KC-130 FE	RW/FW AR	RGR	ALZ EAF	AD	FORM	LONG RANGE NAV	TACNAV	THR(X) (I)	THR(X) (R)	NS	DEFTAC
T&R event requirements to attain competency	210 211* 212 213* 313	274*	271* 272 273	241*	231*	250*	220* 223 224 321	260*	360	204* 205*	461 462
Notes: 1. Some events are duplicated in more than one category but not in the overall total. 2. "*" Denotes a Refresher FE or an individual who needs to regain qualification(s).											

(2) Events Required to Maintain Individual CSP. To maintain CSP, a crewmember must maintain proficiency in all of the T&R events listed in the chart below for that core skill.

KC-130 FE	RW/FW AR	RGR	ALZ EAF	AD	FORM	LONG RANGE NAV	TACNAV	THR(X) (I)	THR(X) (R)	NS	DEFTAC
T&R event requirements to maintain competency	211 212	274	271	241	231	250	224 321	261	360	204 205	462

b. Minimum Combat Leader Requirements. As a minimum, in order to be considered Core Competent, a unit must possess the following numbers of aircrew with the listed flight leadership designations.

KC-130 Leadership Requirements - Squadron						
DESIGNATION	Pilots	Tactical Systems Operator	FEs	Loadmasters	Flight Mechanics	
TPC	18					
SEC LDR	8					
DIV LDR	4					
TAC RAC	8					
RC		2				
STRAT RAC	2					

KC-130 Leadership Requirements - Detachment						
DESIGNATION	Pilots	Tactical Systems Operator	FEs	Loadmasters	Flight Mechanics	Crews
TPC	9					
SEC LDR	4					
DIV LDR	2					
TAC RAC	4					
RC		1				
STRAT RAC	1					

8. Qualifications And Designations Table. The table below delineates T&R events required to be completed to attain initial qualifications, re-qualifications, and designations. All stage lectures, briefs, squadron training and prerequisites shall be complete prior to completing final events. Qualification and designation letters signed by the Commanding Officer shall be placed in individual NATOPS and APR/MPR jackets. Loss of proficiency in all qualification events of a core skill causes the associated qualification to be lost. Regaining a qualification requires completing all R coded syllabus events associated with that qualification.

<u>Qualification</u> (TRACKING CODE)	Initial Event Qualification Requirements.
NSQ(611)	NS-204, NS-205, TACNAV-223, TACNAV-224, RQD-612, RQD-681 and a designation letter signed by the Commanding Officer.
FE-2 NATOPS Evaluation (680)	Core Introduction Phase complete and a designation letter signed by Commanding Officer.
FE-1 NATOPS Evaluation (681)	Core Basic Phase Complete. Plane Captain Syllabi Complete IAW OPNAV 3710.7 and a designation letter signed by Commanding Officer.

Designation (TRACKING CODE)	Initial Event Designation Requirements.
Engine Run (600)	Upon completion of RQD-600, Commanding Officer shall designate FE engine run certified.
Taxi (601)	Upon completion of RQD-612, Commanding Officer shall designate FE engine run certified.
Assistant NATOPS Instructor (683)	RQD-681, RQD-682, 1500 Flight Hours as qualified FE and a designation letter signed by the Commanding Officer.
NATOPS Instructor (684)	RQD-681, RQD-682, RQD-683, 1500 Flight Hours as qualified FE, certification of the Model Manager and a designation letter signed by the Commanding Officer.
FEI (690)	Completion of SFAM-500 through SFAM-504 and 1000 flight hours as a qualified FE and a designation letter signed by the Commanding Officer.
NSI (691)	Upon certification by MAWTS-1 FE will be designated a NSI by the Commanding Officer.
WTI (692)	Upon certification by MAWTS-1 FE will be designated a WTI by the Commanding Officer.

a. Instructor Requirements. A squadron should possess the following numbers of aircrew with the listed instructor designations IAW the KC-130 T&R and MCO 3500.12C (WTPP).

	KC-130 Squadron
INSTRUCTOR DESIGNATION	FES
LATI	
ANI	6
WTI	2
DEFTACI	
NSI	3
FEI	10

	KC-130 Detachment
INSTRUCTOR DESIGNATION	FES
LATI	
ANI	3
WTI	1
DEFTACI	
NSI	1
FEI	5

9. Definitions

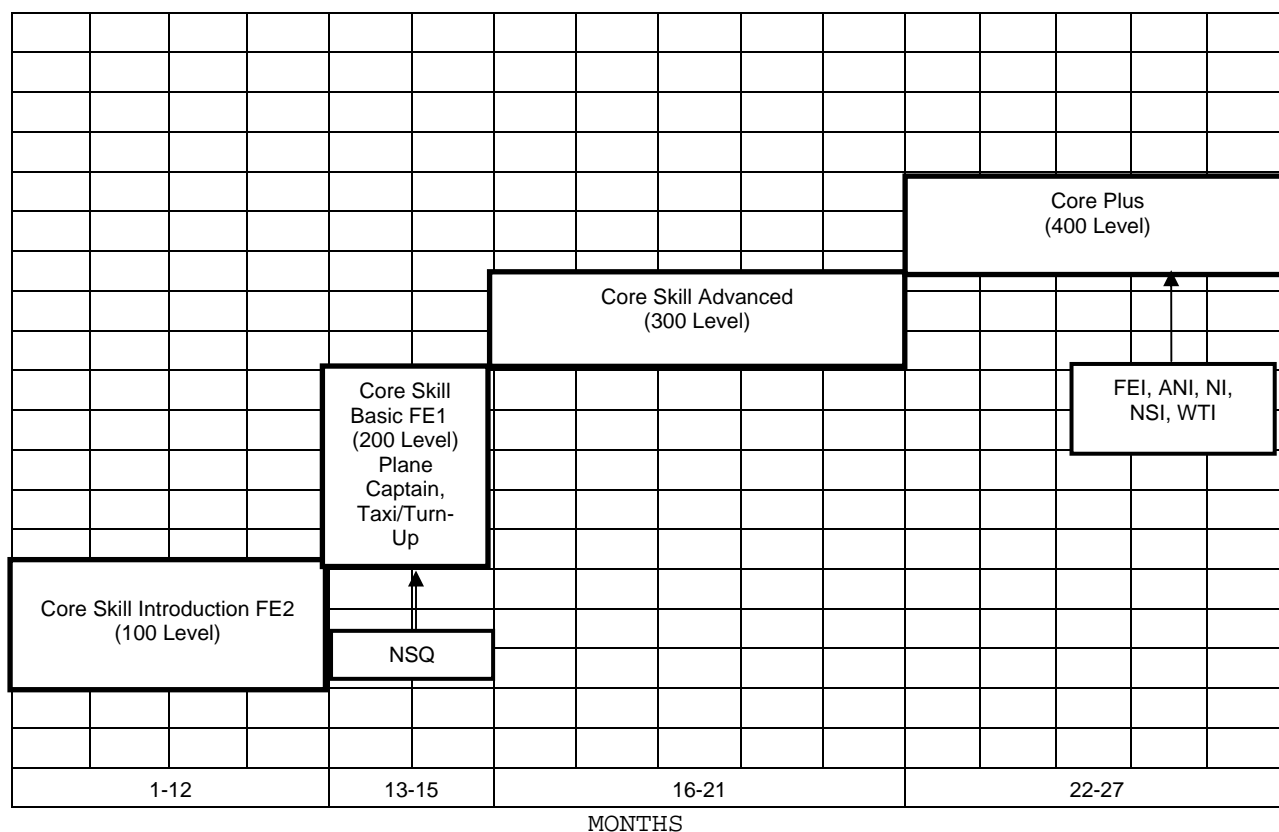
a. Currency. A control measure used to provide an additional margin of safety based on exposure frequency to a particular skill. It is a measure of time since the last event demanding that specific skill. Loss of currency does not affect a loss of Combat Readiness Percentage (CRP). For example, currency determines minimum altitudes in rules of conduct based upon the most recent low altitude fly date. Specific currency requirements for individual type mission profiles can be found in the Aviation T&R Program Manual.

b. Proficiency. Proficiency is a measure of achievement of a specific skill. Re-fly factors establish the maximum time between demonstration of those particular skills. CRP is a measurement of "demonstrated proficiency." If an aircrew exceeds the re-fly factor for a particular event, the individual loses CRP for that particular event. To regain proficiency, an individual shall complete the delinquent event with a proficient crewman/flight lead. If an entire unit loses proficiency, unit instructors shall regain proficiency by completing an event with instructors from a like unit. If not feasible, the instructor shall regain proficiency by completing the event with another instructor. If a unit has only one instructor and cannot complete the event with an instructor from another unit, he shall regain proficiency with another aircraft commander or as designated by his commanding officer.

c. Qualification. A qualification is a status assigned to personnel based on demonstration of proficiency in a specific skill. Specific criteria to achieve qualifications shall be delineated in individual T&R chapters. Upon successful completion of qualification criteria, commanding officers may issue an appropriate qualification letter for inclusion in the NATOPS jacket and APR/MPR. Aircrew do not lose a qualification as a function of re-fly factor for individual events. Loss of proficiency (delinquent re-fly factor) for all associated qualification core skill events constitutes loss of that qualification. Re-qualification requires demonstration of proficiency. Specific re-qualification criteria shall be delineated in individual T&R chapters.

d. Designation. A designation is a status assigned to an individual based on leadership ability. A designation is a command specific, one-time occurrence and remains in effect until removed for cause. Specific designation requirements shall be delineated in individual T&R chapters. Commanders shall issue a designation letter to the individual upon the occasion of original designation, with appropriate copies for inclusion in the NATOPS jacket and APR.

10. KC-130F/R/T FE Progression Model. The training progression model below provides recommended core skill, qualification, and designation attainment timelines for the average FE.



201. PROGRAM OF INSTRUCTION (POI) FOR BASIC, TRANSITION, CONVERSION, AND KC-130J SERIES CONVERSION FE

WEEKS	COURSE	PERFORMING ACTIVITY
Training Track 1		
1-12	KC-130 FE Ground Course	CNATT-MARU
13-15	KC-130 Flight Simulator	Training Squadron
16-35	Core Introduction Training	Training Squadron
36-40	Core Basic Training	Tactical Squadron
41-46	Core Advanced Training	Tactical Squadron
47-53	Core Plus Training	Tactical Squadron
Training Track 2		
1-13	C-130E/H Aircraft Systems/BFE	Little Rock AFB
13-35	C-130E/H FIQ/FMQ	Little Rock AFB
36-42	REV-130 through RQD-680	Tactical Squadron
43-48	Core Basic Training	Tactical Squadron
49-54	Core Advanced Training	Tactical Squadron
55-60	Core Plus Training	Tactical Squadron

WEEKS	COURSE	PERFORMING ACTIVITY
	Training Track 1	
1-12	KC-130 FE Ground Course	CNATT-MARU
13-15	KC-130 Flight Simulator	Training Squadron
16-52	Core Introduction Training	Training Squadron
	Training Track 2	
1-13	C-130E/H Aircraft Systems/BFE	Little Rock AFB
13-35	C-130E/H FIQ/FMQ	Little Rock AFB
36-44	Core Basic Training	Tactical Squadron
45-64	Core Advanced Training	Tactical Squadron
65-80	Core Plus Training	Tactical Squadron

201.1 Training Track 2 Student FE shall complete the following codes at the Tactical Squadron prior to beginning Core Basic Skills Training:

1. REV-130 Engines Systems
2. REV-137 Fuel Systems
3. REV-138 Utility Hydraulics
4. REV-142 Aerial Refueling Systems
5. SMGR-160 Engine Run-Up
6. SMGR-161 Engine Run-Up and Taxi
7. MGR-164 Engine Run-Up and Taxi
8. MGR-165 Engine Run-Up and Taxi
9. MGRCK-166 Taxi Pilot Check
10. MFAM-170 Intro Fixed Wing Aerial Refueling
11. MFAM-171 Refine Fixed Wing Aerial Refueling
12. MFAM-172 Intro Helicopter Aerial Refueling
13. MFAM-173 Refine Helicopter Aerial Refueling
14. RQD-680 FE-2 NATOPS Check

210. GROUND TRAINING COURSES OF INSTRUCTION

1. Ground training shall be conducted for each syllabus level.
2. Squadron level ground training required to complete the syllabus are listed in each syllabus level.
3. The following external ground training courses of instruction are required to complete the syllabus.

<u>COURSE</u>	<u>ACTIVITY</u>
Naval Aircrew Candidate Course	NAS Pensacola, FL
FE Organizational Ground Maintenance Course	CNATT-MARU
FE Initial Qualification	314 th Airlift Sqdn
FE Mission Qualification	314 th Airlift Sqdn
Weapons and Tactics Course	MAWTS-1 Yuma, AZ
Advanced Airlift Tactics Training Course	AATTC St. Joseph, MO
NITE lab	Tactical Squadron

4. The following external training courses are recommended to complete the syllabus:

<u>COURSE</u>	<u>ACTIVITY</u>
Survival, Evasion, Resistance and Escape (SERE)	NAS Brunswick, ME or NAS North Island, CA

211. AIRCREW TRAINING REFERENCES. The following references shall be utilized to ensure safe and standardized training procedures, grading criteria, and aircraft operation:

NATOPS General Flight and Operating Instructions (OPNAVINST 3710.7_)
NATOPS Flight Manuals (NFM)
NATOPS Instrument Flight Manual (NIFM)
NATOPS Air-to-Air Refueling Manual (AAR Manual)
KC-130 Tactical Manual (TACMAN)
T&R Program Manual
MAWTS-1 Course Catalog
Allied Tactical Publication - 56 (ATP-56) Air to Air Refueling
Flight Clearance (FC) - issued by NAVAIR

220. BASIC, TRANSITION, CONVERSION, AND J MODEL SERIES CONVERSION FE TRAINING SUMMARY:

220.1. Core Skill Introduction Training

CORE SKILL INTRODUCTION TRAINING By Stage	Events	Hours	CRP
Simulator Familiarization	15	32.0	17.0
Flight Familiarization	8	28.0	7.0
Review Phase	14	56.0	15.0
Ground/Flight Maintenance Phase	8	25.0	16.0
Mission Familiarization	5	20.0	5.0
FE-2 NATOPS Evaluation	1	8.0	0.0
TOTALS (Less Flight School)	50	169.0	60.0

220.2. Core Skill Basic Training

CORE SKILL BASIC TRAINING By Stage	Events	Hours	CRP
FE Proficiency/Procedure	1	2.0	1.0
Night Systems (NS)	2	4.0	2.0
Aerial Refueling (AR)	4	16.0	2.0
Tactical Navigation (TACNAV)	3	6.0	2.0
Formation (FORM)	1	2.0	1.0
Air Delivery (AD)	2	4.0	2.0
Long Range Navigation (LRNAV)	1	8.0	1.0
Assault Landing Zone (ALZ)	3	6.0	2.0
Rapid Ground Refueling (RGR)	1	0.0	1.0
IR Threat Reaction (THRX(I))	1	2.0	1.0
TOTALS	19	50.0	15.0

220.3. Core Skill Advanced Training

CORE SKILL ADVANCED TRAINING By Stage	Events	Hours	CRP
Tactical Navigation (TACNAV)(LATT)	1	3.0	10.0
Radar Threat Reaction (THRX(R))	1	3.0	10.0
TOTALS	2	6.0	20.0

220.4. Core Plus Training

CORE PLUS TRAINING By Stage	Events	Hours	CRP
Defensive Tactics (DEFTAC)	2	4.0	1.0
Tactical Navigation (TACNAV)	1	2.0	1.0
Assault Landing Zone (ALZ)	1	2.0	1.0
Aerial Delivery (AD)	2	4.0	2.0
TOTALS	6	12.0	5.0

TOTALS	77	241.0	100.00
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221. REFRESHER FE221.1. Core Skill Introduction Training

<i>CORE SKILL INTRODUCTION TRAINING By Stage</i>	Events	Hours	CRP
Simulator Familiarization	13	26.0	13.0
Flight Familiarization	5	24.0	6.0
Review Phase	0	0.0	0.0
Ground/Flight Maintenance Phase	0	0.0	0.0
Mission Familiarization	4	16.0	4.0
FE-2 NATOPS Evaluation	0	0.0	0.0
TOTALS (Less Flight School)	22	66.0	23.0

221.2. Core Skill Basic Training

<i>CORE SKILL BASIC TRAINING By Stage</i>	Events	Hours	CRP
FE Proficiency/Procedure	1	2.0	1.0
Night Systems (NS)	2	4.0	2.0
Aerial Refueling (AR)	4	16.0	2.0
Tactical Navigation (TACNAV)	3	6.0	2.0
Formation (FORM)	1	2.0	1.0
Air Delivery (AD)	2	4.0	2.0
Long Range Navigation (LRNAV)	1	8.0	1.0
Assault Landing Zone (ALZ)	3	6.0	2.0
Rapid Ground Refueling (RGR)	1	0.0	1.0
IR Threat Reaction (THRX(I))	1	2.0	1.0
TOTALS	19	50.0	15.0

221.3. Core Skill Advanced Training

<i>CORE SKILL ADVANCED TRAINING By Stage</i>	Events	Hours	CRP
Tactical Navigation (TACNAV)(LATT)	1	3.0	10.0
Radar Threat Reaction (THRX(R))	1	3.0	10.0
TOTALS	2	6.0	20.0

221.4 Core Plus Training

<i>CORE PLUS TRAINING By Stage</i>	Events	Hours	CRP
Defensive Tactics (DEFTAC)	2	4.0	1.0
Tactical Navigation (TACNAV)	1	2.0	1.0
Assault Landing Zone (ALZ)	1	2.0	1.0
Aerial Delivery (AD)	2	4.0	2.0
TOTALS	6	12.0	5.0

TOTALS	49	138.0	63.0
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222. GRADUATE LEVEL COURSES. There are 2 graduate level courses (NSI, WTI) that qualify instructors for specific portions of the T&R syllabus. The requirements for these instructor certifications are contained in the MAWTS-1 Course Catalog. Squadron T&R Instructors shall be designated by commanding officers and will instruct specific mission types delineated in the individual event descriptions. Stage Instructors are utilized by the FRS

primarily will be designated by commanding officers and will instruct in specific T&R mission types, such as LRNAV, FORM, TACNAV, AR, ALZ and AD.

230. EVENT PERFORMANCE REQUIREMENTS

1. General

a. The time required to train a KC-130 FE to core plus will vary depending on previous FE experience. Basic, transition, and model conversion FE's should fly the entire syllabus. Refresher FE's represent a varying background and should fly flights coded with an R. Commanding Officers will review the qualifications, previous experience, currency, and demonstrated ability of refresher FEs with a view towards waiving and/or combining required flights.

b. Once a FE has completed the core basic introduction series and maintains currency in type and model, no requirement exists to re-fly core basic introduction flights.

c. Flights annotated with an N shall be flown at night, with or without NVDs (depending on qualification). Flights annotated with an (N) may be flown at night, with or without NVD's (depending on qualification). Flights annotated with an NS shall be flown at night utilizing NVDs. Flights annotated with an (NS) may be flown at night and if so shall utilize NVDs.

d. All flights annotated with an E shall be evaluated per the Aviation T&R Program Manual.

e. Minimum required refresher flights are indicated with an R. Additional guidance concerning refresher FEs is contained in the Aviation T&R Program Manual.

f. FEs not NSQ and conducting NS training as a crewmember shall be instructed by an NSI for all Core Basic NSQ syllabus initial codes. Subsequent events may be flown with a proficient NSQ crewmember provided the crewmember meets the requirements for the associated code.

g. For NS operations, the fixed wing minimum altitudes delineated in the Aviation T&R Program Manual, shall be adhered to in all phases of flight except for ALZ operations and airdrops from IP inbound, at which point a descent to airdrop altitude or final approach procedure may be conducted. Minimum altitudes for Aerial Delivery shall be as per NWP 3-22.5-KC-130, Vol. 1, Chapter 6 and Appendix H.

2. Crew Resource Management (CRM). CRM shall be briefed for all flights and events.

231. CORE SKILL INTRODUCTION TRAINING

1. General. Upon completion of this phase of training, the Crew Chief will be NATOPS qualified as a FE 2. The FE will be capable basic aircraft operation to include emergency procedures, CRM. NATOPS check may be conducted any time after completion of the core basic introduction FAM stage. Commanders shall not designate student FEs as an FE-2 until satisfactory completion of the entire core skills introduction phase. Upon NATOPS check completion, FEs shall log the RQD-680 tracking code.

2. Simulator Familiarization

a. Purpose. Familiarize the student FE with responsibilities and duties in the correct use of aircraft checklists, CRM, normal and emergency

procedures, remedial actions for system malfunctions, aircraft limitations, and performance data.

b. General. Basic, model/series conversion, and Refresher FEs shall be trained by a qualified instructor for this phase of training.

(1) One hour of formal classroom training is required for 1 hour of flight simulator training. Refresher FEs need only complete syllabus periods annotated with an R. Aircraft utilization authorized if the OFT is not available.

(2) Upon completion of simulator training, the student FE will be proficient and have demonstrated a thorough working knowledge of all aircraft systems, aircraft checklists, CRM, diagnosis of airborne malfunctions, and remedial actions that can be accomplished while airborne.

c. Crew Requirements. Simulator instructor and pilot as required.

d. Ground/Academic Training. Prior to SFAM-100, all Basic/Conversion/Refresher FEs shall complete ground school course consisting of aircraft systems descriptions, normal and emergency procedures, cockpit resource management, basic weight and balance, aircraft pre-flight and post-flight procedures, emergency evacuation procedures, bailout procedures, donning and use of all emergency equipment.

e. Simulator Training (15 Periods, 30.0 Hours)

SFAM-100 2.0 IPT/CPT/OFT/WST S

Goal. Introduce the FEs responsibilities/ duties, CRM, aircraft limitations, and use of expanded checklists.

Requirement. Student FE shall perform responsibilities/duties associated with the expanded checklist from the cockpit checklist through the engine run-up checklist with assistance as necessary from the instructor FE. Student shall demonstrate knowledge of NATOPS aircraft limitations.

Performance Standard. Student FE shall perform responsibilities/duties per NAVAIR 01-75GAA-1.

Prerequisite. Ground academic training.

Ordinance. N/A

External syllabus support. IPT/CPT/OFT/WST.

SFAM-101 2.0 IPT/CPT/OFT/WST S

Goal. Introduce the FE's responsibilities/duties, CRM, aircraft limitations, and use of expanded checklists.

Requirement. Review previous instructions as necessary. Student FE shall perform responsibilities/duties associated with the expanded checklist from the before take-off checklist through the secure checklist with assistance as necessary from the instructor FE. Student shall demonstrate knowledge of NATOPS aircraft limitations.

Performance Standard. Student FE shall perform responsibilities/duties per NAVAIR 01-75GAA-1.

Prerequisite. SFAM 100.

Ordinance. N/A

External syllabus support. IPT/CPT/OFT/WST.

SFAM-102

2.0 IPT/CPT/OFT/WST S

Goal. Introduce start malfunctions.

Requirement. Review previous instructions as necessary. The student FE shall identify start malfunctions and perform remedial actions IAW the FRS simulator guide.

Performance Standard. Student FE shall perform responsibilities/duties per NAVAIR 01-75GAA-1.

Prerequisite. SFAM 101.

Ordinance. N/A

External syllabus support. IPT/CPT/OFT/WST.

SFAM-103

2.0 IPT/CPT/OFT/WST S

Goal. Review ground emergency malfunctions.

Requirement. Review previous instruction as necessary. Student FE shall demonstrate proper execution of responsibilities/duties, and perform all checklists observing applicable aircraft limitations IAW FRS simulator guide.

Performance Standard. Student FE shall perform responsibilities/duties per NAVAIR 01-75GAA-1.

Prerequisite. SFAM 102.

Ordinance. N/A

External Syllabus Support. IPT/CPT/OFT/WST.

SFAM-104

2.0 R E IPT/CPT/OFT/WST S

Goal. Evaluate the student FE's progress in cockpit procedures, start malfunctions, and ground emergency procedures per NATOPS and FRS simulator guide.

Requirement. Student FE shall demonstrate proper execution of responsibilities/duties, and perform all checklists observing applicable aircraft limitations per FRS simulator guide. The student FE shall satisfactorily complete progress evaluation prior to progressing to the OFT stage of simulator training.

Performance Standard. Student FE shall perform responsibilities/duties per NAVAIR 01-75GAA-1.

Prerequisite. SFAM 103.

Ordinance. N/A

External Syllabus Support. IPT/CPT/OFT/WST.

SFAM-105

2.0 IPT/CPT/OFT/WST S

Goal. Introduce the student FE to the aircraft engine systems, malfunction, and emergency procedures.

Requirement. Review previous instruction as necessary. Student FE shall perform remedial actions and emergency procedures related to aircraft engine systems per the FRS simulator guide.

Performance Standard. Student FE shall perform responsibilities/duties per NAVAIR 01-75GAA-1.

Prerequisite. SFAM 104.

Ordinance. N/A

External Syllabus Support. IPT/CPT/OFT/WST.

SFAM-106

2.0 IPT/CPT/OFT/WST S

Goal. Introduce aircraft propeller systems, malfunctions, and emergency procedures.

Requirement. Review previous instruction as necessary. Student FE shall demonstrate knowledge of aircraft propeller systems and perform remedial actions and emergency procedures related to aircraft propeller systems per FRS simulator guide.

Performance Standard. Student FE shall perform responsibilities/duties per NAVAIR 01-75GAA-1.

Prerequisite. SFAM 105.

Ordinance. N/A

External Syllabus Support. IPT/CPT/OFT/WST.

SFAM-107

2.0 IPT/CPT/OFT/WST S

Goal. Introduce aircraft electrical systems, malfunctions, and emergency procedures.

Requirement. Review previous instruction as necessary. Student FE shall demonstrate knowledge of aircraft electrical systems and perform remedial actions, emergency procedures related to aircraft electrical systems per FRS simulator guide.

Performance Standard. Student FE shall perform responsibilities/duties per NAVAIR 01-75GAA-1.

Prerequisite. SFAM 106.

Ordinance. N/A

External Syllabus Support. IPT/CPT/OFT/WST.

SFAM-108

2.0 IPT/CPT/OFT/WST S

Goal. Introduce aircraft bleed air, anti-ice, and deicing systems, malfunctions, and emergency procedures.

Requirement. Review previous instruction as necessary. Student FE shall demonstrate knowledge of aircraft bleed air, anti-ice, and deicing systems and perform remedial actions and emergency procedures related to aircraft bleed air, anti-ice, and deicing systems.

Performance Standard. Student FE shall perform responsibilities/duties per NAVAIR 01-75GAA-1.

Prerequisite. SFAM 107.

Ordinance. N/A

External Syllabus Support. IPT/CPT/OFT/WST.

SFAM-109

2.0 IPT/CPT/OFT/WST S

Goal. Introduce aircraft fuel systems, malfunctions, and emergency procedures.

Requirement. Review previous instruction as necessary. Student FE shall demonstrate knowledge of aircraft fuel systems and perform remedial actions and emergency procedures related to aircraft fuel systems per FRS simulator guide.

Performance Standard. Student FE shall perform responsibilities/duties per NAVAIR 01-75GAA-1.

Prerequisite. SFAM 108.

Ordinance. N/A

External Syllabus Support. IPT/CPT/OFT/WST.

SFAM-110

2.0 IPT/CPT/OFT/WST S

Goal. Introduce aircraft hydraulic systems, malfunctions, and emergency procedures.

Requirement. Review previous instruction as necessary. Student FE shall demonstrate knowledge of aircraft hydraulic systems and perform remedial actions and emergency procedures related to aircraft hydraulic systems per FRS simulator guide.

Performance Standard. Student FE shall perform responsibilities/duties per NAVAIR 01-75GAA-1.

Prerequisite. SFAM 109.

Ordinance. N/A

External syllabus support. IPT/CPT/OFT/WST.

SFAM-111

2.0 IPT/CPT/OFT/WST S

Goal. Introduce aircraft air conditioning/pressurization systems, malfunctions, and emergency procedures.

Requirement. Review previous instruction as necessary. Student FE shall demonstrate knowledge of aircraft air conditioning and pressurization systems and perform remedial actions, emergency procedures related to aircraft air conditioning/pressurization systems per FRS simulator guide.

Performance Standard. Student FE shall perform responsibilities/duties per NAVAIR 01-75GAA-1.

Prerequisite. SFAM 110.

Ordinance. N/A

External Syllabus Support. IPT/CPT/OFT/WST.

SFAM-112

2.0 IPT/CPT/OFT/WST S

Goal. Introduce aircraft comm/nav systems, voice procedures, malfunctions, and emergency procedures.

Requirement. Review previous instruction as necessary. Student FE shall demonstrate knowledge of aircraft comm/nav systems and voice procedures and perform remedial actions and emergency procedures related to aircraft comm/nav systems per FRS simulator guide.

Performance Standard. Student FE shall perform responsibilities/duties per NAVAIR 01-75GAA-1.

Prerequisite. SFAM 111.

Ordinance. N/A

External Syllabus Support. IPT/CPT/OFT/WST.

SFAM-113

4.0 IPT/CPT/OFT/WST S

Goal. Introduce aircraft aerial refueling systems, malfunctions, and emergency procedures.

Requirement. Review previous instruction as necessary. Student FE shall demonstrate knowledge of aircraft aerial refueling systems and perform remedial actions and emergency procedures related to aircraft aerial refueling systems per FRS simulator guide.

Performance Standard. Student FE shall perform responsibilities/duties per NAVAIR 01-75GAA-1.

Prerequisite. SFAM 112.

Ordinance. N/A

External Syllabus Support. IPT/CPT/OFT/WST.

SFAM-114 4.0 R E IPT/CPT/OFT/WST S

Goal. Evaluate simulator progress.

Requirement. The student FE shall successfully complete a standard evaluation in the correct use of aircraft checklists, CRM, normal and emergency procedures, remedial actions for system malfunctions, and aircraft performance data.

Performance Standard. Student FE shall perform responsibilities/duties per NAVAIR 01-75GAA-1.

Prerequisite. SFAM 113.

Ordinance. N/A

External Syllabus Support. IPT/CPT/OFT/WST.

2. Flight Familiarization

a. Purpose. Familiarize the student FE with normal flight operations under various flight conditions.

b. General. This portion of training deals with actual flight operations. The student FE must possess and display a thorough working knowledge of all aircraft systems prior to the start of flight training per FRS syllabus.

c. Crew Requirements. Minimum flight crew including FE instructor per NAVAIR 01-75GAA-1.

d. Ground/Academic Training. The familiarization stage requires a minimum of 2 hours of ground instruction prior to each flight.

e. Flight Training (8 Flights, 40.0 Hours)

FAM-115 4.0 R 1 KC-130 A

Goal. Familiarize the student FE with correct turnaround inspection and normal flight operations.

Requirement. The student FE shall be familiar with correct turnaround inspection, and normal flight operations per NA01-75GAA-6-1 and NFM.

Performance Standard. Student FE shall perform responsibilities/duties per NA01-75GAA-6-1 and NFM.

Prerequisite. SFAM 114.

Ordinance. N/A

External Syllabus Support. N/A

FAM-116

4.0 R 1 KC-130 A

Goal. Familiarize the student FE with time management of turnaround inspection, computation of performance data, and normal flight operations.

Requirement. The student FE shall be familiar with time management of turnaround inspections, computation of performance data, and normal flight operations per NA01-75GAA-6-1 and NA0175GAA-1.

Performance Standard. Student FE shall perform responsibilities/duties per NA01-75GAA-6-1 and NFM.

Prerequisite. FAM 115.

Ordinance. N/A

External syllabus support. N/A

FAM-117

4.0 R 1 KC-130 A N

Goal. Refine time management of turnaround inspection responsibilities and duties to include performance data computation, Weight and Balance Form 365-4 completion, and normal flight operations during night conditions.

Requirement. The student FE shall be able to coordinate and perform aircraft turnaround inspections per current instructions utilizing proper time management to accomplish all required tasks, including correct performance data computation, accurate Weight and Balance Form 365-4 completion, and normal flight operations during night conditions.

Performance Standard. Student FE shall perform responsibilities/duties per NA01-75GAA-6-1 and NFM.

Prerequisite. FAM 116.

Ordinance. N/A

External syllabus support. N/A

FAM-118

8.0 R 1 KC-130 A

Goal. Familiarize the student FE in all weather operations and procedures per NFM.

Requirement. The student FE shall be able to perform his duties in all weather conditions.

Performance Standard. Student FE shall perform responsibilities/duties per NA01-75GAA-6-1 and NFM.

Prerequisite. FAM 117.

Ordinance. N/A

External syllabus support. N/A

FAM-119 4.0 R 1 KC-130 A

Goal. Familiarize student FE with simulated engine out approach, landing and go around procedures.

Requirement. The student FE shall be familiar with all normal and emergency procedures related to engine out flight conditions.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. FAM 118.

Ordinance. N/A

External syllabus support. N/A

FAM-120 4.0 R 1 KC-130 A

Goal. Familiarize the student FE on extended over water flight operations to include mission planning, range prediction, range control, endurance, and use of engine/fuel logs.

Requirement. The student FE shall be able to perform normal procedures and mission planning, and use aircraft performance data (range prediction, range control, and endurance), and engine/fuel logs associated with extended over water flights.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. FAM-120.

Ordinance. N/A

External syllabus support. N/A

3. Systems Review

a. Purpose. Review aircraft systems, systems operation, system malfunctions, corrective actions, and troubleshooting per current instructions.

b. General. This portion of training deals with actual flight operations. The student FE must possess and display a thorough working knowledge of all aircraft systems prior to the start of flight training per FRS syllabus. Instructor FE may induce malfunctions and simulated emergencies as practical.

c. Crew Requirements. Minimum flight crew including FE instructor per NAVAIR 01-75GAA-1.

d. Ground/Academic Training. The systems review stage requires a minimum of 2 hours of ground instruction prior to each flight.

e. Flight Training (13 Flights, 52.0 Hours)

REV-130 4.0 1 KC-130 A

Goal. Review aircraft engines and GTC/APU.

Requirement. The student FE shall be knowledgeable on aircraft engine operation as it pertains to interoperability of the aircraft during flight operations, possible malfunctions, troubleshooting, and corrective actions per FRS student guide.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. FAM 117.

Ordinance. N/A

External syllabus support. N/A

REV-131 4.0 1 KC-130 A

Goal. Review aircraft engine related systems.

Requirement. The student FE shall be knowledgeable on aircraft engine related systems operation as it pertains to interoperability of the aircraft during flight operations, possible malfunctions, troubleshooting, and corrective actions per FRS student guide.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. REV-130.

Ordinance. N/A

External syllabus support. N/A

REV-132 4.0 1 KC-130 A

Goal. Review aircraft propeller system.

Requirement. The student FE shall be knowledgeable on aircraft propeller system operation as it pertains to interoperability of the aircraft during flight operations, possible malfunctions, troubleshooting, and corrective actions including the blade assemblies, barrel assembly, dome assembly, spinner assembly, anti-icing/deicing assemblies, control assembly, governing system, synchrophasing system, and propeller controls per FRS student guide.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. REV-131.

Ordinance. N/A

External syllabus support. N/A

REV-133

4.0 R 1 KC-130 A

Goal. Review the aircraft AC electrical systems.

Requirement. The student FE shall be knowledgeable on AC electrical systems operation as it pertains to interoperability of the aircraft during flight operations, possible malfunctions, troubleshooting, and corrective actions including the primary and secondary systems, indicators, and system warning lights per FRS student guide.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. REV-132.

Ordinance. N/A

External syllabus support. N/A

REV-134

4.0 1 KC-130 A

Goal. Review the aircraft DC electrical system.

Requirement. The student FE shall be knowledgeable in aircraft DC electrical systems as it pertains to interoperability of the aircraft during flight operations including TR units, the battery system, indicators, and system warning lights, their operation, possible malfunctions, troubleshooting, and corrective actions per FRS student guide.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. REV-133.

Ordinance. N/A

External syllabus support. N/A

REV-135

4.0 1 KC-130 A

Goal. Review bleed air systems, anti-icing and deicing systems.

Requirement. The student FE shall be knowledgeable on the aircraft bleed air systems as it pertains to interoperability of the aircraft during flight operations to include the air turbine motor, associated bleed air valves & ducting, nacelle preheat, bleed air system controls, and isolation valves, wing and empennage anti-icing, propeller anti-icing/de-icing, and NESA system, possible malfunctions, troubleshooting, and corrective actions per FRS student guide.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. REV-134.

Ordinance. N/A.

External syllabus support. N/A

REV-136

4.0 1 KC-130 A

Goal. Review air conditioning, pressurization, and oxygen systems.

Requirement. The student FE shall be knowledgeable on aircraft air conditioning systems as it pertains to interoperability of the aircraft during flight operations including the flight station and cargo compartment air conditioning systems, outflow valve, safety valve, cabin pressure controls, and oxygen systems operation, possible malfunctions, troubleshooting, and corrective actions per FRS student guide.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. REV-135.

Ordinance. N/A.

External syllabus support. N/A

REV-137

4.0 1 KC-130 A

Goal. Review the aircraft fuel systems.

Requirement. The student FE shall be knowledgeable on aircraft fuel systems as it pertains to interoperability of the aircraft during flight operations including the refueling/defueling system and procedures, tank configuration, water removal, cross feed, fuel transfer and jettison, IFR, single-point refueling systems, fuel system controls, and the fuel indicating systems operation, possible malfunctions, troubleshooting, and corrective actions per FRS student guide.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. REV-136.

Ordinance. N/A

External syllabus support. N/A

REV-138

4.0 1 KC-130 A

Goal. Review the aircraft utility hydraulic systems.

Requirement. The student FE shall be knowledgeable on the utility hydraulic systems as it pertains to interoperability

of the aircraft during flight operations to include the basic hydraulic system and sub systems (portion of flight controls, landing gear, IFR, flaps, wheel brakes, and nose wheel steering systems) possible malfunctions, troubleshooting, and corrective actions per FRS student guide.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. REV-137

Ordinance. N/A

External syllabus support. N/A

REV-139

4.0 1 KC-130 A

Goal. Review the aircraft booster and auxiliary hydraulic systems.

Requirement. The student FE shall be knowledgeable on aircraft booster and auxiliary hydraulic systems as it pertains to interoperability of the aircraft during flight operations to include basic hydraulic systems and subsystems portion of the flight controls, ramp and aft cargo door, emergency brakes, and the emergency nose landing gear extension systems operation, possible malfunctions, troubleshooting, and corrective actions per FRS student guide.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. REV-138.

Ordinance. N/A

External syllabus support. N/A

REV-140

4.0 R 1 KC-130 A

Goal. Review the aircraft communications systems.

Requirement. The student FE shall be knowledgeable on communication systems operation as it pertains to interoperability of the aircraft during flight operations, voice procedures, possible malfunctions, troubleshooting, and corrective actions per FRS student guide.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. REV-139.

Ordinance. N/A

External syllabus support. N/A

REV-141

4.0 R 1 KC-130 A

Goal. Review navigation and flight instrument systems.

Requirement. The student FE shall be knowledgeable on aircraft navigation system operation as it pertains to interoperability of the aircraft during flight operations, troubleshooting, and corrective actions per FRS student guide.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. REV-140.

Ordinance. N/A

External syllabus support. N/A

REV-142 4.0 1 KC-130 A

Goal. Review aircraft aerial refueling systems.

Requirement. The student FE shall be knowledgeable on aircraft aerial refueling systems operation as it pertains to interoperability of the aircraft during flight operations, possible malfunctions, troubleshooting, and corrective actions per FRS student guide.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. REV-141.

Ordinance. N/A

External syllabus support. N/A

4. Intermediate Progress Evaluation

- a. Purpose. Evaluate the student FE's overall progress.
- b. General. Flight portion of the progress evaluation will be conducted on an extended over water flight or an extended overland flight to include a Remain Overnight (RON).
- c. Crew requirements. Minimum flight crew to include a FE instructor.
- d. Academic/Ground Training. N/A
- e. Flight Training (1 Flight, 4.0 Hours)

CK-150 4.0 R E OFT/WST/1KC-130 S/A

Goal. Evaluate the student FE's overall progress.

Requirement. The student FE shall have demonstrated his knowledge of normal and emergency procedures, all aircraft systems operations, possible malfunctions, troubleshooting, and corrective actions per FRS student guide and NFM.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. Completion of all familiarization and review codes.

Ordinance. N/A

External syllabus support. N/A

5. Maintenance Ground Runs and Functional Check Flights (FCF)

a. Purpose. Familiarize the student FE on post maintenance run-up procedures and FCF procedures.

b. General. All required FCFs will be conducted upon completion of post maintenance run-ups.

c. Crew Requirements. One pilot and FE instructor.

d. Academic/Ground Training. Each flight requires 1 hour of classroom instruction.

e. Simulator Training (4 Periods, 14.0 Hours)

SMGR-160 3.0 IPT/CPT/OOFT/WST S

Goal. Introduce ground maintenance run-up procedures.

Requirement. The student FE shall be familiar with ground maintenance run-up procedures per FRS Maintenance Ground Run-Up and Functional Check Flight student guide. The student FE shall occupy the left seat during this phase.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. Completion of all familiarization and review codes.

Ordinance. N/A

External syllabus support. IPT/CPT/OFT/WST.

SMGR-161 3.0 IPT/CPT/OFT/WST S

Goal. Refine ground maintenance run-up procedures.

Requirement. The student FE shall be proficient on ground maintenance run-up procedures per FRS Maintenance Ground Run-Up and Functional Check Flight student guide. The student FE shall occupy the left seat during this phase.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. SMGR-160.

Ordinance. N/A

External syllabus support. IPT/CPT/OOFT/WST.

SFCF-162 4.0 IPT/CPT/OFT/WST S

Goal. Introduce FCF procedures to student FE per current instructions.

Requirement. The student FE shall be familiar with FCF procedures per FRS Maintenance Ground Run-Up and Functional Check Flight student guide.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. SMGR-161.

Ordinance. N/A

External syllabus support. IPT/CPT/OOFT/WST.

SFCF-163

4.0 IPT/CPT/OFT/WST S

Goal. Refine FCF procedures per current instructions.

Requirement. The student FE shall perform an "A" profile FCF per FRS Maintenance Ground Run-Up and Functional Check Flight student guide and NFM.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. SMGR-162.

Ordinance. N/A

External syllabus support. IPT/CPT/OOFT/WST.

Ground Training (3 Periods, 9.0 Hours)

MGR-164

3.0 1 KC-130 S

Goal. Refine ground maintenance run-up procedures.

Requirement. The student FE shall perform a phase ground maintenance run-up from the left seat per FRS Maintenance Ground Run-Up and Functional Check Flight student guide.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. SMGR-163.

Ordinance. N/A

External syllabus support. N/A

MGR-165

3.0 1 KC-130 S

Goal. Refine ground maintenance run-up procedures and introduce taxi procedures.

Requirement. The student FE shall perform a phase ground maintenance run-up from the left seat and demonstrate proper taxi procedures per FRS Maintenance Ground Run-Up and Functional Check Flight student guide.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. MGR-164.

Ordinance. N/A

External syllabus support. N/A

MGRCK-166 3.0 R 1 KC-130 S

Goal. Maintenance ground run-up check.

Requirement. The student FE shall be proficient on phase maintenance ground run-up procedures per FRS Maintenance Ground Run-Up and Functional Check Flight student guide.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. MGR-165.

Ordinance. N/A

External syllabus support. N/A

f. Flight Training (1 Flight, 2.0 Hours)

FCF-167 2.0 R 1 KC-130 A

Goal. Review FCF procedures.

Requirement. The student FE shall perform a Functional check-flight per FRS Maintenance Ground Run-Up and Functional Check Flight student guide and NFM.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. MGR-166.

Ordinance. N/A

External syllabus support. N/A

6. Mission Familiarizations

a. Purpose. Familiarize the student FE with aircraft missions.

b. General. Instructor FE will induce emergencies and malfunctions as practical.

c. Crew Requirements. Minimum flight crew and FE instructor.

d. Academic/Ground Training. Each flight requires 1 hour of classroom instruction.

e. Flight Training (7 Flights, 28.0 Hours)

<u>MFAM-170</u>	<u>4.0</u>	<u>1 KC-130 A</u>	<p><u>Goal.</u> Fixed wing aerial refueling procedures familiarization.</p> <p><u>Requirement.</u> The student FE shall be familiar with fixed wing aerial refueling procedures including the transfer of fuel to receiver aircraft.</p> <p><u>Performance Standard.</u> Student FE shall perform responsibilities/duties per NFM.</p> <p><u>Prerequisite.</u> CK-150.</p> <p><u>Ordinance.</u> N/A</p> <p><u>External syllabus support.</u> Fixed wing receiver, special use airspace.</p>
<u>MFAM-171</u>	<u>4.0</u>	<u>1 KC-130 A</u>	<p><u>Goal.</u> Refine fixed wing aerial refueling missions.</p> <p><u>Requirement.</u> The student FE shall demonstrate proper procedures including transfer of fuel to receiver aircraft and EMCON fixed wing aerial refueling missions.</p> <p><u>Performance Standard.</u> Student FE shall perform responsibilities/duties per NFM.</p> <p><u>Prerequisite.</u> SFAM-113, MFAM-170.</p> <p><u>Ordinance.</u> N/A</p> <p><u>External syllabus support.</u> Fixed wing receiver, special use airspace.</p>
<u>MFAM-172</u>	<u>4.0</u>	<u>1 KC-130 A</u>	<p><u>Goal.</u> Introduce helicopter refueling missions.</p> <p><u>Requirement.</u> The student FE shall be familiar with helicopter refueling procedures including the transfer of fuel to receiver aircraft.</p> <p><u>Performance Standard.</u> Student FE shall perform responsibilities/duties per NFM.</p> <p><u>Prerequisite.</u> SFAM-113, MFAM-170.</p> <p><u>Ordinance.</u> N/A</p> <p><u>External syllabus support.</u> Rotary wing receiver, special use airspace</p>
<u>MFAM-173</u>	<u>4.0</u>	<u>1 KC-130 A</u>	<p><u>Goal.</u> Low level missions familiarization.</p> <p><u>Requirement.</u> The student FE shall demonstrate proper procedures during low level missions per FRS student guide.</p>

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. CK-150.

Ordinance. N/A

External syllabus support. Military Training Route.

MFAM-174

4.0 2 KC-130 A

Goal. Introduce formation procedures.

Requirement. The student FE shall be familiar with formation flight procedures per NFM.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. CK-150.

Ordinance. N/A

External syllabus support. Special Use Airspace.

232. CORE BASIC TRAINING

1. General

a. Upon completion of this phase of training, the FE will be day and NSQ in the non-LAT NSQ environment for the basic core skill mission areas. They include Tactical Navigation (TACNAV) in a threat environment (THRX(I)), Assault Landing Zone operations (ALZ), FW/RW air-to-air refueling (AR), Rapid Ground Refueling (RGR) operations and long range operation. The focus will be on flight CRM, aircraft preflight preparation, location and use of emergency equipment, ground and inflight emergency procedures, aircraft post flight procedures, systems operation, system malfunctions, corrective actions, fault isolation and inflight fault isolation. At the completion of this phase, the FE (FE_2) shall be NATOPS qualified, designated a "FE 1" RQD-681.

b. FEs receiving initial training shall be instructed by either current squadron FE Instructors, WTIs or NSIs (as required). Once they have completed the initial event, subsequent events shall be flown with like-qualified aircrew.

c. Within this phase of training, the FE will fly a Functional Check Flight, perform applicable flight profiles and associated checks per check flight conditions, to include a review of normal and emergency procedures during an FCF profile A, B, C, or D, ensuring proficiency in Functional Check Flight procedures. Upon completion the FE shall log RQD-602.

d. On completion of the required events contained in this phase, the FE 2 shall be observed on a FE 1 NATOPS evaluation. NATOPS checks may be conducted any time after completion of the core basic introduction FAM stage. Commanders shall not designate a student FEs as an FE-1 until satisfactory completion of the entire 200 series phase. Upon NATOPS check completion, FEs shall log the RQD-681 tracking code. The provisions of the NFM and OPNAVINST 3710.7_apply. NATOPS check shall be administered by a designated ANI/NI.

e. Conduct FEs (FE-1) annual NATOPS re-certification. The FE-1 shall be administered an annual NATOPS check for standardization, training, and readiness.

(1) Upon NATOPS check completion, FEs shall log the RQD-682 tracking code. The provisions of the NFM and OPNAVINSTINST 3710.7_ apply.

(2) NATOPS check shall be administered by a designated ANI/NI.

(3) RQD-682 qualification shall be updated yearly.

2. Familiarization

a. Purpose. Maintain FE proficiency on administrative flights.

b. General. FE shall fly initial codes with a qualified instructor; subsequent events may be flown with a qualified crew provided the FE meets the prerequisites for the event.

c. Crew Requirements. Minimum flight crew and FE instructor.

d. Academic/Ground Training. Each flight requires 1 hour of classroom instruction.

e. Flight Training (1 Flight, 2 Hours)

<u>FE-200</u>	<u>2.0</u>	<u>1 KC-130/OFT/WST A/S (N)</u>
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Goal. Maintain proficiency in normal and emergency procedures during day or night flight operations.

Requirement. Review normal and emergency procedures during day flight operations per current instructions.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. FE-2 (RQD-680) Qualification.

Ordinance. N/A

External syllabus support. N/A

2. Night Systems Familiarization

a. Purpose. To develop proficiency operating aircraft using night vision devices in a non-LAT environment.

b. General

(1) FE conducting NS training shall be instructed by an NSI for all initial codes. Subsequent events and non-syllabus NS codes or NS optional codes may be initially flown with a proficient NSQ crewmember as long as the FE has the prerequisites for the event.

(2) Required flights for NSQ are NS-204, NS-205, TACNAV-223, and TACNAV-224.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. MAWTS-1 NVD ASP courses and NITE lab (includes Night Vision Systems, N.S. Human Factors and Night Environment ASPs).

e. Flight Training (2 Flights, 4 Hours)

NS-204 2.0 1 KC-130 A NS

Goal. HLL NVD Operations.

Requirement. Preflight shall include a flight station, cargo compartment and exterior lighting demonstration with NVDs. Mission must be flown per T&R Program Manual HLL standards.

Performance Standard. Satisfactory completion per NFM, KC-130 TACMAN (AS REQUIRED), and OPNAVINST 3710.7_.

Prerequisite. MAWTS-1 NVD ASP ground instruction and NITE lab.

Ordinance. N/A

External syllabus support. N/A

NS-205 2.0 1 KC-130 A NS

Goal. LLL NVD Operations.

Requirement. Conduct all operations included in NS-203 under LLL conditions.

Performance Standard. Satisfactory completion per NFM, KC-130 TACMAN (AS REQUIRED), and OPNAVINST 3710.7_.

Prerequisite. NS-204.

Ordinance. N/A

External syllabus support. N/A

3. Aerial Refueling Familiarization

a. Purpose. Refine FE skills in aerial refueling missions per current instructions.

b. General. FE shall conduct normal and emergency procedures associated with aerial refueling in addition to crew responsibilities in both day, night and NVD procedures.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Review NATOPS Flight Manual, NATOPS flight manual supplements, NATOPS Air-to-Air Refueling Manual, KC-130 TACMAN, and MAWTS-1 Tactical AR Courseware relating to fixed wing AR procedures.

e. Flight Training (4 Flights, 16.0 Hours)

AR-210 4.0 1 KC-130/OFT/WST A/S

Goal. Day fixed wing aerial refueling procedures.

Requirement. Review normal and emergency aerial refueling procedures PER KC-130 TACMAN and AR Manual. Use of EMCON procedures is optional.

Performance Standard. FE shall perform responsibilities/duties IAW NFM.

Prerequisite. FE-200.

Ordinance. N/A

External syllabus support. Fixed wing receiver aircraft and special use airspace.

AR-211

4.0 1 KC-130/OFT/WST A/S N

Goal. Introduce and refine night fixed wing aerial refueling procedures.

Requirement. Review normal and emergency aerial refueling procedures at night per KC-130 TACMAN and AR Manual. Use of EMCON procedures is optional.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. AR-210.

Ordinance. N/A

External syllabus support. Fixed wing receiver aircraft and special use airspace.

AR-212

4.0 1 KC-130/OFT/WST A/S

Goal. Day helicopter aerial refueling procedures.

Requirement. Review normal and emergency helicopter refueling procedures per KC-130 TACMAN and AR Manual. Use of EMCON procedures is optional.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. AR-210.

Ordinance. N/A

External Syllabus Support. Rotary wing receiver aircraft and special use airspace.

AR-213

4.0 1 KC-130/OFT/WST A/S N

Goal. Introduce night helicopter aerial refueling procedures.

Requirement. Review normal and emergency helicopter refueling procedures at night per KC-130 TACMAN and AR Manual. Use of EMCON procedures is optional.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. AR-212.

Ordnance. N/A

External syllabus support. Rotary wing receiver aircraft and special use airspace.

4. Tactical Navigation

a. Purpose. Train the FE in low level procedures.

b. General

(1) FE conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ FE as long as the FE has met the prerequisites for the event.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Review NATOPS Flight Manual, KC-130 TACMAN, and MAWTS-1 ASP Low Level Navigation Courseware.

e. Flight Training (3 Flights, 6.0 Hours)

TACNAV-220 2.0 1 KC-130/OFT/WST A/S

Goal. Day low level procedures.

Requirement. Fly a low level route PER KC-130 TACMAN procedures.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. FE-200.

Ordnance. N/A

External syllabus support. N/A

TACNAV-223 2.0 1 KC-130/OFT/WST A/S NS

Goal. NVG HLL low level procedures.

Requirement. Fly a night low level route per KC-130 TACMAN procedures.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. TACNAV-220, NS-204, NS-205.

Ordinance. N/A

External syllabus support. N/A

TACNAV-224 2.0 1 KC-130/OFT/WST A/S NS

Goal. NVG LLL low level procedures.

Requirement. Fly a night low level route per KC-130 TACMAN procedures.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. TACNAV-220, NS-204, NS-205.

Ordinance. N/A

External syllabus support. N/A

5. Formation

a. Purpose. Train the FE in formation procedures.

b. General

(1) FE conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ FE as long as the FE has met the prerequisites for the event.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Review NATOPS Flight Manual, KC-130 TACMAN, and MAWTS-1 ASP Low Level Navigation Courseware.

e. Flight Training (1 Flight, 2.0 Hours)

FORM-231 2.0 2 KC-130/OFT/WST A/S (N)

Goal. Proficiency training in formation procedures.

Requirement. Fly a 2-plane formation flight per NATOPS and TACMAN.

Performance Standard. Student FE shall perform responsibilities/duties per NFM.

Prerequisite. TACNAV-220.

Ordinance. N/A

External syllabus support. N/A

6. Aerial Delivery

a. Purpose. Introduce the FE in aerial delivery procedures per current instructions.

b. General

(1) FE conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ FE as long as the FE has met the prerequisites for the event.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Review NFM, KC-130 TACMAN, and MAWTS-1 AD courseware information regarding personnel and cargo delivery procedures.

e. Flight Training (2 Flights, 4.0 Hours)

AD-241 2.0 1 KC-130/OFT/WST A/S

Goal. Introduce aerial delivery procedures.

Requirement. Fly and review aerial delivery mission of cargo or troops per TACMAN.

Performance Standard. FE shall perform responsibilities/duties per NFM.

Prerequisite. FE-200.

Ordinance. N/A

External syllabus support. AD Platoon, USAF CCT, USMC MMT.

AD-242 2.0 1 KC-130/OFT/WST A/S NS

Goal. Introduce NVG aerial delivery procedures.

Requirement. Fly and review aerial delivery mission of cargo or troops and NVG considerations per TACMAN.

Performance Standard. FE shall perform responsibilities/duties per NFM.

Prerequisite. AD-241.

Ordinance. N/A

External syllabus support. AD Platoon, USAF CCT, USMC MMT.

7. Long Range Over Water Navigation

a. Purpose. Refine skills in extended over water procedures.

b. General. Fly an extended over water flight and review over water procedures placing emphasis on mission planning, use of aircraft performance data, and engine/fuel logs.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Specific fuel panel procedures, and NATOPS long range cruise considerations.

e. Flight Training (1 Flight, 8.0 Hours)

LRNAV-250 8.0 1 KC-130 A (N)

Goal. Refine extended over water procedures.

Requirement. Fly an extended over water flight and review over water procedures, placing emphasis on mission planning, use of aircraft performance data, and engine/fuel logs.

Performance Standard. FE shall perform responsibilities/duties per NFM.

Prerequisite. FE-200.

Ordinance. N/A

External syllabus support. N/A

8. Threat Reaction IR Counter tactics/ASE Intro

a. Purpose. Refine the FE IR counter tactics procedures.

b. General

(1) FE conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ FE as long as the FE has met the prerequisites for the event.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Prior to THRX(I)-261, the FE shall review pertinent chapters in the KC-130 TACMAN and receive:

(1) MAWTS-1 ASP course on tactical CRM.

(2) MAWTS-1 ASP course on MAGTF Ground Based Air Defense System (GBADS).

(3) MAWTS-1 ASP course on KC-130 specific threat counter tactics.

(4) Specific training on installed KC-130FRT ASE equipment.

e. Flight Training (1 Flight, 2.0 Hours)

THR-261 2.0 1 KC-130 A (N)

Goal. Train the FE duties in IR counter tactics.

Requirement. Conduct and train in IR counter tactics. Introduce FE to pertinent ground loading procedures, system setup and operation of ASE systems in flight, with emphasis on evasive flight techniques in coordination with ASE employment. Conduct defensive maneuvering against ground IR threat. Emphasize conduct of flight and lookout doctrine.

Performance Standard. FE shall perform responsibilities/duties per NFM.

Prerequisite. FE-200, TACNAV-220.

Ordinance. 300 decoy flares.

External syllabus support. SST Team.

9. Assault Landing Zones

a. Purpose. Train the FE on assault landing zones and Expeditionary Airfield Operations.

b. General

(1) FE conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ FE as long as the FE has met the prerequisites for the event.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Review Assault Landing Zone operations in KC-130 TACMAN. Review MAWTS-1 ASP ALZ courseware. Familiarize the FE with ground emergencies in an austere environment, performance data for specific circumstances, and applicable pubs for unimproved runway operation.

e. Flight Training (3 Flights, 6.0 Hours)

ALZ-271 2.0 1 KC-130/OFT/WST A/S

Goal. Introduce TLZ procedures at improved fields.

Requirement. Introduce maximum effort takeoffs and landings at improved fields per TACMAN. Review all appropriate performance data.

Performance Standard. FE shall perform responsibilities/duties per NFM.

Prerequisite. FE-200.

Ordinance. N/A

External syllabus support. MMT, CCT.

ALZ-272 2.0 1 KC-130/OFT/WST A/S NS

Goal. Introduce NVG (HLL) TLZ procedures.

Requirement. Introduce maximum effort takeoffs and landings in high light level per TACMAN. Review all appropriate performance data.

Performance Standard. FE shall perform responsibilities/duties per NFM.

Prerequisite. FE-200, NS-204, ALZ-271.

Ordinance. N/A

External syllabus support. MMT, CCT.

ALZ-273 2.0 1 KC-130/OFT/WST A/S NS

Goal. Introduce NVG (LLL) TLZ procedures.

Requirement. Introduce maximum effort takeoffs and landings in a LLL per TACMAN. Review all appropriate performance data.

Performance Standard. FE shall perform responsibilities/duties per NFM.

Prerequisite. FE-200, NS-204, NS-205, ALZ-271, ALZ-272.

Ordinance. N/A

External syllabus support. MMT, CCT.

10. Rapid Ground Refueling (RGR)

a. Purpose. Train the FE in RGR.

b. General

(1) FE conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ FE as long as the FE has met the prerequisites for the event.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Review KC-130 TACMAN RGR procedures and MAWTS-1 ASP RGR courseware. Complete a class that includes but is not limited to a review of hand and arm signals, defense of site, flight operations around site, and crew responsibilities/CRM on the ground.

e. Flight Training (1 Flights, 0.0 Hours)

RGR-274 0.0 1 KC-130 S (N)

Goal. Train the FE in RGR.

Requirement. Conduct RGR with actual aircraft engines running per NATOPS and TACMAN.

Performance Standard. FE shall perform responsibilities/duties per NFM.

Prerequisite. FE-200.

Ordinance. N/A

External syllabus support. N/A

233. CORE SKILL ADVANCED TRAINING

1. General. Upon completion of this level, the FE will be proficient in LAT (TACNAV) low level, Assault Landing Zone operations, basic aerial delivery procedures and Defensive Tactics against surface-based threats (THRXI). The purpose of this phase of training is to provide a core skill advanced FE. FE receiving initial training shall be instructed by either a current FE Instructor (RQD-690), or WTI (RQD-692) when required.

2. Tactical Navigation

a. Purpose. To qualify the FE, or to maintain proficiency for the LAT qualified FE, in both day and night LAT in the unique tasks and requirements associated with low altitude tactics flights in a low to medium ground threat environment.

b. General

(1) FE conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ FE as long as the FE has met the prerequisites for the event. LAT rules of conduct are contained in the KC-130 TACMAN. All LAT sorties require all crew members to be LAT qualified and proficient.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Per the MAWTS-1 Course Catalog. Complete MAWTS-1 ASE courseware for LAT and review KC-130 TACMAN or published TTP as appropriate.

e. Flight Training (1 Flight, 3.0 Hours)

<u>TACNAV-321</u>	<u>3.0</u>	<u>1 KC-130/OFT/WST A/S</u>
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Goal. Introduce and qualify the FE, or to maintain proficiency for the LAT qualified FE, in the duties associated with low altitude tactics flights in a low to medium ground threat environment.

Requirement. Emphasize cargo compartment preparation, crew briefing, lookout doctrine, scan for threats, CRM and combat entry/exit checklists. This event may include air-to-air refueling, aerial delivery or any type of air/land delivery.

Performance Standard. Per the NFM and KC-130 TACMAN.

Prerequisite. FE-200, TACNAV-220.

Ordinance. N/A

External Support. Approved LAT training route, Threat Emitters.

3. Threat Reaction (Radar) (THRXI)

a. Purpose. Qualify the FE in the coordinated use of defensive maneuvering and the Aircraft Survivability Suite (ASE) against surface-to-air threat systems.

b. General. Qualify the FE, or maintain proficiency for the DEFTAC qualified FE, in the unique tasks and requirements associated with defensive tactics flights in a low to medium air threat environment. This phase of instruction may be taught locally utilizing the MAWTS-1 ASP, or in conjunction with AATTC, by a qualified instructor.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Prior to THRXI-360, the FE shall review pertinent chapters in the KC-130 TACMAN and receive:

- (1) MAWTS-1 ASP course on Tactical CRM.
- (2) MAWTS-1 ASP course on MAGTF Ground Based Air Defense System (GBADS).
- (3) MAWTS-1 ASP course on KC-130 Specific Threat Counter Tactics.
- (4) Specific training on installed KC-130FRT ASE equipment.
- (5) Complete THRX(IR)-261.

e. Flight Training (1 Flight, 3.0 Hours)

<u>THRX-360</u>	<u>4.0</u>	<u>1 KC-130 A (N)</u>
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Goal. Train the FE in IR counter tactics.

Requirement. Conduct and train in radar counter tactics. Refine pertinent ground loading procedures, system setup and operation of ASE systems in flight. Emphasize evasive flight techniques in coordination with ASE employment. Conduct defensive maneuvering against radar threat. Emphasize briefing, conduct of flight, and lookout doctrine.

Performance Standard. FE shall perform responsibilities/duties per NFM.

Prerequisite. FE-200, TACNAV-220, THRX-261.

Ordinance. 140 decoy flares, 160 chaff.

External syllabus support. Approved LAT training route, Threat Emitters, SST team.

234. CORE PLUS TRAINING

1. General. Upon completion of this level, the FE will be proficient in unaided tactical navigation, day and night high altitude aerial delivery, battlefield illumination aerial delivery, defensive tactics against an air-based threat, and night unaided assault landings. FEs receiving initial training shall be instructed by either a current Squadron Stage Instructor, DEFTACI, NSI or WTI (as required). When the initial event is completed, subsequent events may be flown with proficient aircrew.

2. Tactical Navigation

a. Purpose. Qualify the FE, or to maintain proficiency for the LAT qualified FE, in both day and night LAT in the unique tasks and requirements associated with low altitude tactics flights in a low to medium ground threat environment.

b. General

(1) FE conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ FE as long as the FE has met the prerequisites for the event. LAT rules of conduct are contained in the KC-130 TACMAN. All LAT sorties require all crew members to be LAT qualified and proficient.

(2) A qualified instructor (WTI/FEI) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Per the MAWTS-1 Course Catalog. Complete MAWTS-1 ASE courseware for LAT and review KC-130 TACMAN or published TTP as appropriate.

e. Flight Training (1 Flight, 2.0 Hours)

TACNAV-422 2.0 1 KC-130/OFT/WST A/S N

Goal. Introduce and qualify the FE in unaided low level navigation, or to maintain proficiency for the qualified FE, in the duties associated with night low level flights in a low to medium ground threat environment.

Requirement. Emphasize cargo compartment preparation, crew briefing, lookout doctrine, scan for threats, CRM and combat entry/exit checklists. This event may include air-to-air refueling, aerial delivery or any type of air/land delivery.

Performance Standard. Per the NFM and KC-130 TACMAN.

Prerequisite. FE-200, TACNAV-220, TACNAV-321.

Ordinance. N/A

External Support. Approved training route, Threat Emitters.

3. Aerial Delivery

a. Purpose. Refine high altitude environment aerial delivery procedures per TACMAN.

b. General

(1) FE conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ FE as long as the FE has met the prerequisites for the event.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Review NFM, KC-130 TACMAN, and MAWTS-1 AD courseware information regarding personnel and cargo delivery procedures.

e. Flight Training (2 Flights, 4.0 Hours)

AD-442 2.0 1 KC-130/OFT/WST A/S (N)

Goal. Introduce and qualify the FE, or to maintain proficiency for the qualified FE, in the duties associated with high altitude environment aerial delivery.

Requirement. Emphasize cargo compartment preparation, crew briefing, lookout doctrine, scan for threats, CRM and combat entry/exit checklists. This event may include air-to-air refueling, aerial delivery or any type of air/land delivery.

Performance Standard. Per the NFM and KC-130 TACMAN.

Prerequisite. FE-200, AD-241.

Ordinance. N/A

External Support. AD Platoon.

AD-444 2.0 1 KC-130/OFT/WST A/S N

Goal. Introduce and qualify the FE, or to maintain proficiency for the qualified FE, in the duties and procedures associated with battlefield illumination.

Requirement. Emphasize cargo compartment preparation, crew briefing, CRM and combat entry/exit checklists.

Performance Standard. Per the NFM and KC-130 TACMAN.

Prerequisite. FE-200, AD-241.

Ordinance. LU-2A/B.

External Support. Ordnance Personnel, approved training area.

4. Defensive Tactics (DEFTAC)

a. Purpose. Introduce defensive tactics utilized in air-to-air engagements by combining maneuvering and use of the ASE suite. Emphasize lookout doctrine and use of the Rear Vision Device (RVD).

b. General. The DEFTAC qualification requirements consist of DEFTAC-461 and DEFTAC-462. The following is recommended but not required:

(1) Aircraft preferred to have fully operational ASE suite.

(2) If ASE-equipped aircraft is used, appropriate chaff and decoy flares shall be loaded prior to flight.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Academic prerequisites per MAWTS-1 KC-130FRT Defensive Tactics Course. This phase of instruction may be taught locally utilizing the MAWTS-1 ASP, or in conjunction with AATTC, by a qualified instructor. DEFTAC shall be instructed by a DEFTACI/WTI. Prior to DEFTAC-461, the FE shall receive:

(1) MAWTS-1 ASP course on Tactical CRM.

(2) MAWTS-1 ASP course on MAGTF Ground Based Air Defense System (GBADS).

(3) MAWTS-1 ASP course on KC-130 Specific Threat Counter-Tactics.

(5) Specific training on installed KC-130FRT ASE equipment.

e. Flight Training (2 Flights, 4.0 Hours)

<u>DEFTAC-461</u>	<u>2.0</u>	<u>1 KC-130, 1 Adversary A</u>
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Goal. Introduce the FE to defensive tactics mission maneuvering relative to an air threat.

Requirement. The FE will perform normal and emergency procedures during a flight involving the use of defensive tactics. Emphasize crew briefing, lookout doctrine, scan for air threats and terrain clearance, CRM and combat entry/exit checklists. This event may include escorts.

Performance Standard. Per the NFM and KC-130 TACMAN.

Prerequisite. FE-200, TACNAV-220, TACNAV-321.

Ordinance. Standard Chaff load (160) and Decoy Flare (140).

External Syllabus Support. Appropriate aggressor aircraft.

<u>DEFTAC-462</u>	<u>2.0</u>	<u>1 KC-130, 2 Adversaries A</u>
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Goal. Refine and maintain proficiency for the DEFTAC qualified FE during a defensive tactics mission maneuvering relative to an air threat.

Requirement. The FE will perform normal and emergency procedures during a flight involving the use of defensive

tactics. Emphasize crew briefing, lookout doctrine, scan for air threats and terrain clearance, CRM and combat entry/exit checklists. This event may include escorts.

Performance Standard. Per the NFM and KC-130 TACMAN.

Prerequisite. FE-200, TACNAV-220, TACNAV-321, DEFTAC-461.

Ordinance. Standard Chaff load (160) and Decoy Flare load (140).

External Syllabus Support. Appropriate aggressor aircraft.

4. Assault Landing Zones

a. Purpose. Train the FE on assault landing zones and Expeditionary Airfield Operations.

b. General

(1) FE conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ FE as long as the FE has met the prerequisites for the event.

(2) A qualified instructor (FEI) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Review Assault Landing Zone operations in KC-130 TACMAN. Review MAWTS-1 ASP ALZ courseware. Familiarize the FE with ground emergencies in an austere environment, performance data for specific circumstances, and applicable pubs for unimproved runway operation.

e. Flight Training (1 Flight, 2.0 Hours)

<u>ALZ-471</u>	<u>2.0</u>	<u>1 KC-130/OFT/WST A/S N</u>
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Goal. Introduce unaided TLZ procedures at improved/unimproved fields.

Requirement. FE shall be exposed to unaided maximum effort takeoffs and landings at improved field per TACMAN. Review all appropriate performance data.

Performance Standard. FE shall perform responsibilities/duties per NFM.

Prerequisite. FE-200, ALZ-271.

Ordinance. N/A

External syllabus support. MMT, CCT.

240. INSTRUCTOR TRAINING1. FE Instructor

a. Purpose. Qualify the FE as a FE Instructor (FEI). At the completion of this training the FEI shall be qualified to instruct all Core Introduction, Basic, and Advanced level codes for FEs and Flight Mechanics. Standardize the FEI procedures for CPT/OFT/WST device operation.

b. General

(1) Emphasize standardization and the ability of the FE to instruct normal and emergency procedures per the NATOPS Flight Manual. Upon successful completion of SFAM-504 the FE shall be evaluated inflight for qualification RQD-690, to receive designation as an FEI.

(2) 1,000 flight hours as a qualified FE are required to begin this stage of qualification.

(3) This phase of training is required for FEI designation. Requirements are NSQ, Core Basic and Core Advanced complete.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Simulator Training (5 Periods, 20.0 Hours)SFAM-5004.0E CPT/OFT S

Goal. Familiarize the Instructor Under Training (IUT) in the proper operation of the device trainers.

Requirement. Instruct IUT on proper set-up and safe operation of device trainer.

Performance Standard. IUT FE shall perform responsibilities/duties per NFM.

Prerequisite. RQD-611, RQD-681, Core Advanced complete.

Ordinance. N/A

External syllabus support. N/A

SFAM-5014.0E CPT/OFT S

Goal. Refine device operation.

Requirement. Review FAM-500; IUT will demonstrate proper device operation per current instruction.

Performance Standard. IUT FE shall perform responsibilities/duties per NFM.

Prerequisite. SFAM-500, RQD-611, RQD-681, Core Advanced complete.

Ordinance. N/A

External syllabus support. N/A

<u>SFAM-502</u>	<u>4.0</u>	<u>E CPT/OFT S</u>
<u>Goal.</u> Refine device operation.		
<u>Requirement.</u> Review FAM-501; combine device operations with instructional techniques.		
<u>Performance Standard.</u> IUT FE shall perform responsibilities/duties per NFM.		
<u>Prerequisite.</u> SFAM-500, SFAM-501, RQD-611, RQD-681, Core Advanced complete.		
<u>Ordinance.</u> N/A		
<u>External syllabus support.</u> N/A		
<u>SFAM-503</u>	<u>4.0</u>	<u>E CPT/OFT S</u>
<u>Goal.</u> Refine device operation and instructional techniques.		
<u>Requirement.</u> Review FAM-502.		
<u>Performance Standard.</u> IUT FE shall perform responsibilities/duties per NFM.		
<u>Prerequisite.</u> SFAM-500, SFAM-501, SFAM-502, RQD-611, RQD-681, Core Advanced complete.		
<u>Ordinance.</u> N/A		
<u>External syllabus support.</u> N/A		
<u>SFAM-504</u>	<u>4.0</u>	<u>E CPT/OFT S</u>
<u>Goal.</u> Qualification to operate the device trainer.		
<u>Requirement.</u> IUT must demonstrate proper device operation, combining instructional technique.		
<u>Performance Standard.</u> IUT FE shall perform responsibilities/duties per NFM.		
<u>Prerequisite.</u> SFAM-500, SFAM-501, SFAM-502, SFAM-503, RQD 611, RQD-681, Core Advanced complete.		
<u>Ordinance.</u> N/A		
<u>External syllabus support.</u> N/A		

250. REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS

1. Purpose. To provide a vehicle for tracking codes associated with qualifications and designations.

2. General

a. E-coded sorties are evaluation sorties. E-coded sorties in the 600-level phase may be logged in conjunction with any sortie that completes its stage. For example, RQD-635 may be flown in conjunction with DACMG-363. CRP

is not awarded for these 600-level sorties; however, CRP credit may be obtained by logging the appropriate training code(s) in the 200-400 level syllabus. Once the flight to attain the qualification/designation is complete, a letter from the squadron commanding officer awarding the qualification/designation shall be placed in the NATOPS and APR before that qualification/designation may be utilized.

b. After the commanding officer has designated the FE in writing as a FE I or a FE II, the operations department shall log RQD-681 (FE I) and RQD-680 (FE II) respectively.

3. Engine Run/Taxi qualifications

a. Purpose. Designate the FE in engine runs and taxi procedures. This stage does not require flight time, but does require the use of a KC-130 aircraft for the indicated time. RQD-600 and 601 are to be completed at the discretion of the commanding officer.

b. Ground Use of Aircraft Training (2 Events, 2.0 Hours)

RQD-600 Engine Run Designation 1.0 R E 1 KC-130 A

Goal. Evaluate FE on engine run procedures.

Requirement. NATOPS Instructor/Evaluator will evaluate Student FE High/Low power engine run procedures

Performance Standard. Qualified per MIMS, NFM, and local course rules and DSS program.

RQD-601 Taxi Pilot Designation 1.0 R E 1 KC-130 A

Goal. Evaluate FE on taxi procedures.

Requirement. NATOPS Pilot Instructor/Evaluator will evaluate FE on taxi procedures

Performance Standard. Qualified per NFM, 3710.7_ and local course rules.

c. Flight Training (1 Flight, 2.0 Hours)

RQD-602 Functional Check Flight 2.0 1 KC-130 A

Goal. Qualify and maintain currency for FE proficiency in functional check flight procedures.

Requirement. Conduct an engine run and flight phase inspection upon completion of post maintenance discrepancies. The flight shall include the shutdown and air-start of at least 1 engine.

Performance Standard. Satisfactorily execute procedures per the NFM, OPNAVINST 3710.7_, and OPNAVINST 4790.2_.

4. Night Systems Qualification (NSQ)

a. Purpose. NSQ qualification.

b. General. FE receiving instruction leading to NSQ in the KC-130 will be qualified in the equivalent day sortie. An NSI crewmember shall conduct this phase of instruction.

c. Ground Training. MAWTS-1 NVD ASP courses and NITE lab (includes Night Vision Systems, N.S. Human Factors and Night Environment ASPs).

d. Flight Training (1 Flight, 4.0 Hours)

RQD-611 Night Systems Qualified 2.0 1 KC-130 A NS

Goal. Night Systems Qualification, qualify the FE in flights involving the utilization of Night Vision Devices.

Requirement. The FE will demonstrate the ability to perform crew specific duties utilizing night devices. Flight may be conducted in conjunction with initial TACNAV-224.

Performance Standard. Satisfactorily execute procedures per NFM, KC-130 TACMAN, TTP (AS REQUIRED), and MAWTS-1 ASP for NSQ.

Prerequisite. Night Lab and MAWTS-1 approved ground course, (NVD-1/NVD-2); NS-204, NS-205, TACNAV-223, TACNAV-224, RQD-681.

5. FE Evaluations

a. Purpose. Evaluate the student FE per NATOPS procedures.

b. General. FE evaluations will be conducted during this phase. Upon successful completion of these stages, the FE under instruction shall be designated the appropriate level of qualification. The FE-2 is considered systems qualified but requires supervision by a FEI until successful completion of phase of training.

c. Crew Requirements. Minimum crew and FE assistant NATOPS instructor.

d. Flight Training (6 Flights, 24.0 Hours)

RQD-680 4.0 E 1 KC-130/OFT/WST A/S (N)

Goal. FE-2 NATOPS evaluation.

Requirement. NATOPS instructor/evaluator will evaluate student FE per NATOPS procedures. RON flight is preferred.

Performance Standard. Student FE shall perform responsibilities/duties per NFM, 3710.7_, 4790.2_ and associated MIMS.

Prerequisite. All core skill introduction codes.

RQD-681 4.0 R, E 1 KC-130 A (N)

Goal. FE-1 NATOPS initial evaluation.

Requirement. NATOPS instructor/evaluator will evaluate FE per NATOPS procedures. Should be either AR, AD, LL, TLZ, RGR, or combination mission. RON flight is preferred.

Performance Standard. FE under instruction shall perform responsibilities/duties per NFM, TACMAN, 3710.7_, 4790.2_ and associated MIMS.

Prerequisite. FAM-200 through FAM-280, RQD-611.

RQD-682

4.0 R, E 1 KC-130 A

Goal. Annual NATOPS evaluation and subsequent annual evaluations.

Requirement. NATOPS instructor/evaluator will evaluate FE per NATOPS procedures. RON flight is preferred. Should be either AR, AD, LL, TLZ, RGR, or combination mission.

Performance Standard. FE under evaluation shall perform responsibilities/duties per NFM, TACMAN, 3710.7_, 4790.2_ and associated MIMS.

Prerequisite. Successful completion of NATOPS open and closed books tests per NFM.

RQD-683

4.0 R, E 1 KC-130 A

Goal. Assistant NATOPS Instructor Designation.

Requirement. NATOPS instructor/evaluator will evaluate FE per NATOPS procedures. RON flight is preferred. Should be either AR, AD, LL, TLZ, RGR, or combination mission.

Performance Standard. FE under instruction shall perform responsibilities/duties per NFM, TACMAN, 3710.7_, 4790.2_ and associated MIMS.

Prerequisite. RQD-611, RQD-690.

RQD-684

4.0 R, E 1 KC-130 A

Goal. NATOPS Instructor Designation.

Requirement. Model Manager will evaluate FE per NATOPS procedures. Should be either AR, AD, LL, TLZ, RGR, or combination mission. RON flight is preferred.

Performance Standard. FE under instruction shall perform responsibilities/duties per NFM, TACMAN, 3710.7_, 4790.2_ and associated MIMS.

Prerequisite. RQD-611, RQD-683, RQD-690.

RQD-690

4.0 R, E 1 KC-130 A

Goal. FE Instructor Designation.

Requirement. NATOPS instructor/evaluator will evaluate FE per NATOPS procedures. Should be either AR, AD, LL, TLZ, RGR, or combination mission. RON flight is preferred.

Performance Standard. FE under instruction shall perform responsibilities/duties per NFM, TACMAN, 3710.7_, 4790.2_ and associated MIMS.

Prerequisite. SFAM-500 through SFAM-504.

6. Night System Instructor Certification

a. Purpose. NSI Qualification for FE.

b. General. The T&R Program Manual and the MAWTS-1 Course Catalog define the requirements and training requirements for NSI. The completion of the Core Skill Advanced Phase and Division Leader designation is a prerequisite. The build-up phase may be administered by a squadron NSI, however a MAWTS KC-130 Instructor shall conduct the certification flight. Upon certification by MAWTS-1, the NSI designation will be assigned by the squadron commanding officer.

c. Flight Training (1 Flight, 2.0 Hours). Refer to MAWTS-1 Course Catalog.

RQD-691 2.0 E 1 KC-130 A N NS

Goal. NSI Qualification.

Requirement. Per MAWTS-1 Course Catalog.

Performance Standard. Satisfactorily execute the procedures per NFM, KC-130 TACMAN, and TTP (AS REQUIRED), MAWTS-1 ASP for NSI.

Prerequisite. MAWTS-1 ASP for NSI, RQD-611, AND RQD-612.

7. Weapons and Tactics Instructor (WTI)

a. Purpose. Certify the KC-130 FEI as a Weapons and Tactics Instructor capable of safely conducting ground and airborne instruction in the KC-130 Crewmember Core Skill Advanced and Core Skill Plus flight syllabus.

b. General. The KC-130 WTI Course is developed by MAWTS-1 and is conducted in conjunction with the WTI Course. Upon graduation, the candidate will be certified by MAWTS-1 as a WTI crewmember. WTI designation may be made by the squadron commanding officer

c. Flight Training. As published in the MAWTS-1 Course Catalog.

RQD-692 2.0 E 1 KC-130 A N NS

Goal. Demonstrate proficiency of the instructional skills required to conduct crewmember tactical training in the Core Skill Advanced and Core Skill Plus stages of training.

Requirement. The WTI candidate will plan, brief, instruct, critique and document a crewmember tactical training event in conjunction with a WTI Major Evolution or Final Exercise (FINEX) sortie. The WTI candidate will complete a minimum of 3 IUT build-up flights in conjunction with specific and common phases of WTI flight phase prior to the certification flight as listed in the MAWTS-1 Course Catalog.

Performance Standards. See MAWTS-1 Course Catalog.

Prerequisites. Per MAWTS-1 Course Catalog requirements.

260. EXPENDABLE ORDNANCE REQUIREMENTS. Not applicable.

261. SYLLABUS MATRIX. **CORE SKILL INTRODUCTION TRAINING**

STAGE	CODE	HRS	SIM HRS	REFLY	CRP	R	E	
SFM	100		2.0	*	1.0			
SFM	101		2.0	*	1.0			
SFM	102		2.0	*	1.0			
SFM	103		2.0	*	1.0			
SFM	104		2.0	*	2.0	X	X	
SFM	105		2.0	*	1.0			
SFM	106		2.0	*	1.0			
SFM	107		2.0	*	1.0			
SFM	108		2.0	*	1.0			
SFM	109		2.0	*	1.0			
SFM	110		2.0	*	1.0			
SFM	111		2.0	*	1.0			
SFM	112		2.0	*	1.0			
SFM	113		2.0	*	1.0			
SFM	114		4.0	*	2.0	X	X	
FAM	115	4.0		*	1.0	X		
FAM	116	4.0		*	1.0	X		
FAM	117	4.0		*	1.0	X		
FAM	118	4.0		*	1.0	X		
FAM	119	4.0		*	1.0	X		
FAM	120	8.0		*	2.0	X		
REV	130	4.0		*	1.0			
REV	131	4.0		*	1.0			
REV	132	4.0		*	1.0			
REV	133	4.0		*	1.0	X		
REV	134	4.0		*	1.0			
REV	135	4.0		*	1.0			
REV	136	4.0		*	1.0			
REV	137	4.0		*	1.0			
REV	138	4.0		*	1.0			
REV	139	4.0		*	1.0			
REV	140	4.0		*	1.0	X		
REV	141	4.0		*	1.0	X		
REV	142	4.0		*	1.0			
CHK	150	4.0		*	2.0	X	X	
SMGR	160	3.0		*	2.0			
SMGR	161	3.0		*	2.0			
SFCF	162	4.0		*	2.0			
SFCF	163	4.0		*	2.0			
MGR	164	3.0		*	2.0			
MGR	165	3.0		*	2.0			
MGRCK	166	3.0		*	2.0	X		

CORE SKILL INTRODUCTION TRAINING

STAGE	CODE	HRS	SIM HRS	REFLY	CRP	R	E	
FCF	167	4.0		*	2.0	X		
MFAM	170	4.0		*	1.0			
MFAM	171	4.0		*	1.0			
MFAM	172	4.0		*	1.0			
MFAM	173	4.0		*	1.0			
MFAM	174	4.0		*	1.0			

CORE SKILL BASIC

STAGE	CODE	HRS	REFLT	CRP	REMARKS
FE	200	2.0	90	1.0	(N)
NS	204	2.0	180	1.0	N
NS	205	2.0	180	1.0	N
AR	210	4.0	180	0.5	
AR	211	4.0	365	0.5	N
AR	212	4.0	180	0.5	
AR	213	4.0	365	0.5	N
TACNAV	220	2.0	365	0.5	
TACNAV	223	2.0	365	0.5	N
TACNAV	224	2.0	180	1.0	N
FORM	231	2.0	180	1.0	2 AC
AD	241	2.0	365	1.0	
AD	242	2.0	365	1.0	NS
LRNAV	250	8.0	365	1.0	
THR	261	2.0	365	1.0	
ALZ	271	2.0	180	1.0	
ALZ	272	2.0	365	0.5	N
ALZ	273	2.0	365	0.5	N
RGR	274	0.0	365	1.0	

CORE SKILL ADVANCED

STAGE	CODE	HRS	REFL	CRP	REMARKS
TACNAV	321	3.0	*	10.0	
THR	360	4.0	*	10.0	

CORE PLUS

STAGE	CODE	HRS	REFLT	CRP	REMARKS
TACNAV	422	2.0	*	1.0	N
AD	442	2.0	*	1.0	
AD	444	2.0	*	1.0	N
DEFTAC	461	2.0	*	0.5	
DEFTAC	462	2.0	*	0.5	
ALZ	471	2.0	*	1.0	N

INSTRUCTOR TRAINING

STAGE	CODE	HRS	REFLT	CRP	E	REMARKS
SFAM	500	4.0	*	*	X	SIM
SFAM	501	4.0	*	*	X	SIM
SFAM	502	4.0	*	*	X	SIM
SFAM	503	4.0	*	*	X	SIM
SFAM	504	4.0	*	*	X	SIM

REQUIREMENTS, QUALIFICATIONS, AND DESIGNATIONS

STAGE	CODE	HRS	TRACK	A/C OR SIM	R	E	NOTES
RQD	600	1.0		A/C	X	X	HIGH/LOW POWER TURN-UP DESIGNATION
RQD	601	1.0		A/C	X	X	TAXI PILOT DESIGNATION
RQD	602	2.0		A/C			FUNCTIONAL CHECK FLIGHT
RQD	611	2.0		A/C			NSQ
RQD	680	4.0		A/C		X	FE-2 NATOPS CHECK
RQD	681	4.0		A/C	X	X	FE-1 NATOPS CHECK
RQD	682	4.0		A/C	X	X	FE ANNUAL NATOPS
RQD	683	4.0		A/C	X	X	ANI DESIGNATION
RQD	684	4.0		A/C	X	X	NI DESIGNATION
RQD	690	4.0	X	A/C	X	X	FEI DESIGNATION
RQD	691	2.0		A/C		X	NSI DESIGNATION
RQD	692	2.0		A/C		X	WTI DESIGNATION

262. T&R CHAINING TABLES. Event chaining allows for the completion of more complex and/or advanced events using the same skills to update proficiency status of events. Only events in a sequence entailing demonstration of equivalent skills shall be chained.

a. When a T&R event is logged, the proficiency dates of other T&R events (usually lower in number) may be updated. The T&R code that is logged is known as the "chaining code," and the updated codes are "chained codes." Chained codes are not always updated when a chaining code is logged.

b. Conditional Chaining. The following environmental conditions further specify which T&R codes are chain-updated.

(1) Night Optional. Chained codes annotated with parentheses around them, e.g. (200), are only chain-updated if the chaining code is flown at night.

(2) Night Systems Optional. Chained codes annotated with parentheses and "NS" after them, e.g. (200 NS), are only chain-updated if the chaining code is flown using night systems.

(3) Light Level Optional. Chained codes annotated with parentheses and "HLL" after them, e.g. (200 HLL), are only chain-updated if the chaining code is flown using night systems during a high light level period. Chained codes annotated with parentheses and "LLL" after them, e.g. (200 LLL), are only chain-updated if the chaining code is flown using night systems during a low light level period.

c. Syllabus Event Conversion Matrix. The matrix is used to convert Stage and Training Code events from the previous KC-130FRT T&R Manual to the Stage and Training Codes contained within this Manual. The automated flight scheduling tool, Squadron Assistance Risk Assessment (SARA), will automatically convert and update the previous Stage and Training Codes

contained under the Old Primary column to the New Stage and Training Codes. There is a possibility that more than one old Stage and Training Code could map to the New Stage and Training Codes. Therefore, the column "Old Secondary" was established. Due to software shortcomings in the SARA program, SARA can only map one old code to the new code. It is the responsibility of the local SARA administrator to manually map "Old Secondary" codes to the new Stage and Training Codes.

EVENT UPDATE CHAINING

<u>FLIGHT</u>	<u>FLIGHTS UPDATED</u>
200	
204	200
205	200, 204
210	200
211	200, 210
212	200
213	200, 212
220	200
223	200, 220
224	200, 220, 223
231	200
241	200
242	200, 204, 205, 241
250	200
261	200, 220
271	200
272	200, 204, 205, 271
273	200, 204, 205, 273, 274
274	200
313	200, 204, 205, 212, 213
321	200, 220
360	200, 220, 261
422	200, 220
442	200, 241
444	200, 241
461	200, 220
462	200, 220, 461
471	200, 271

Syllabus Event Conversion Matrix		
STAGE AND TRAINING CODE - NEW	STAGE AND TRAINING CODE - OLD PRIMARY	STAGE AND TRAINING CODE - OLD SECONDARY
SFAM-100	SFAM-100	
SFAM-101	SFAM-101	
SFAM-102	SFAM-102	
SFAM-103	SFAM-103	
SFAM-104	SFAM-104	
SFAM-105	SFAM-105	
SFAM-106	SFAM-106	
SFAM-107	SFAM-107	
SFAM-108	SFAM-108	
SFAM-109	SFAM-109	
SFAM-110	SFAM-110	
SFAM-111	SFAM-111	
SFAM-112	SFAM-112	
SFAM-113	SFAM-113	
SFAM-114	SFAM-114	
FAM-115	FAM-115	
FAM-116	FAM-116	
FAM-117	FAM-117	
FAM-118	FAM-118	
FAM-119	FAM-119	
FAM-120	FAM-120	
REV-130	REV-130	
REV-131	REV-131	
REV-132	REV-132	
REV-133	REV-133	
REV-134	REV-134	
REV-135	REV-135	
REV-136	REV-136	
REV-137	REV-137	
REV-138	REV-138	
REV-139	REV-139	
REV-140	REV-140	
REV-141	REV-141	
REV-142	REV-142	
CK-150	CK-150	
SMGR-160	SMGR-160	
SMGR-161	SMGR-161	
SFCF-162	SFCF-162	
SFCF-163	SFCF-163	
MGR-164	MGR-164	
MGR-165	MGR-165	
MGRCK-166	MGRCK-166	
FCF-167	FCF-167	
MFAM-170	MFAM-170	
MFAM-171	MFAM-171	
MFAM-172	MFAM-172	
MFAM-173	MFAM-175	
MFAM-174	MFAM-176	

STAGE AND TRAINING CODE - NEW	STAGE AND TRAINING CODE - OLD PRIMARY	STAGE AND TRAINING CODE - OLD SECONDARY
FE-200	FE-200	
NS-204	NVG-601	
NS-205	NVG-601	
AR-210	AR-210	
AR-211	AR-211	
AR-212	AR-212	
AR-213	AR-213	
TACNAV-220	LL-220	
TACNAV-223	NVG-621	
TACNAV-224	LL-221	
FORM-231	FORM-231	
AD-241	AD-240	
AD-242	NVG-640	
LRNAV-250	OWICAO-250	
THRX-261	ASE-360	
ALZ-271	TLZ-270	
ALZ-272	NVG-670	
ALZ-273	NVG-671	
RGR-274	RGR-273	
TACNAV-321	LAT-434	
THRX-360	ASE-360	
TACNAV-422	LL-221	
AD-442	AD-340	
AD-444	AD-343	
DEFTAC-461	DEFTAC-460	
DEFTAC-462	DEFTAC-461	
ALZ-471	TLZ-371	
FAM-500	FAM-500	
FAM-501	FAM-501	
FAM-502	FAM-502	
FAM-503	FAM-503	
FAM-504	FAM-504	
RQD-600		
RQD-601		
RQD-602	FCF-280	
RQD-611	NVG-690	
RQD-680	CK-190	
RQD-681	CK-290	
RQD-682	CK-390	
RQD-683	NATOPS-591	
RQD-684	NATOPS-591	
RQD-690	FEI-690	
RQD-691	NSI-593	
RQD-692	WTI-594	

CHAPTER 3

TACTICAL SYSTEMS OPERATOR (TSO)/MISSION SPECIALIST

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CHAPTER 3

TACTICAL SYSTEMS OPERATOR (TSO)/MISSION SPECIALIST

300. MARINE AERIAL REFUELING SQUADRON (KC-130FRT) UNIT CORE COMPETENCY

1. Background. Marine Aviation plays a crucial role in the MAGTF's ability to conduct Maneuver Warfare. The ultimate goal of Marine Aviation is to attain the highest possible combat readiness to support Expeditionary Maneuver Warfare while at the same time preserving and conserving our Marines and equipment. Embedded within our combat readiness is the ability to rapidly, effectively, and efficiently deploy on short notice and the ability to quickly and effectively plan for crises and/or contingency operations thereby ensuring Marine Aviation remains ready for combat when and where the need arises. The KC-130FRT T&R Manual represents the collaborative effort of KC-130FRT Subject Matter Experts who designed training standards to maximize the full combat capabilities of the KC-130FRT and its crew. These standards, intrinsic in the core competency section, describe and define unit capabilities and requirements necessary to maintain like-squadron proficiency in core skills and combat leadership. Training events are based on specific requirements and performance standards to ensure aircrew maintain a common base of training and depth of combat capabilities. Together, the T&R comprises a building block approach to ensure that trained aircrews remain ready, relevant, and fully capable of supporting the MAGTF commander.

2. VMGR Mission. Support the MAGTF Commander by providing aerial refueling and assault support, day or night under all weather conditions during expeditionary, joint, or combined operations.

3. Mission Essential Task List (METL)

- a. (UJTL TA 1.1.1) Conduct Tactical Airlift
 - Conduct assault support transport.
- b. (UJTL TA 1.1.4) Conduct Sea and Air Deployment Operations
 - Maintain the capability to deploy and operate from advanced bases, expeditionary airfields and forward operating bases.
 - Perform organizational maintenance on assigned aircraft.
- c. (UJTL TA 1.2.2) Conduct Airborne Operations
 - Provide air delivered assault support transport of combat troops, equipment and supplies.
 - Provide support for casualty evacuation operations.
 - Maintain self-defense capability from ground-to-air and air-to-air threats.
- d. (UJTL TA 4.2) Distribute Supplies and Provide Transport Services
 - Conduct aerial re-supply.
 - Provide support for mobile Forward Arming and Refueling Points (FARPS).
 - Provide support for Rapid Ground Refueling (RGR) of aircraft and vehicles.

- e. (UJTL TA 4.2.3) Conduct Air Refueling
 - Provide Tactical and Long-range Aerial Refueling.
- f. (UJTL TA 5) Exercise Command and Control
 - Provide Airborne Platform for the Airborne DASC Command Post.
- g. (UJTL TA 6.2) Conduct Joint Personnel Recovery
 - Conduct Tactical Recovery of Aircraft and Personnel (TRAP) operations.
 - Augment local Search and Rescue (SAR) assets
- h. (UJTL TA 6.4) Conduct Noncombatant Evacuation
 - Provide support for evacuation operations.

4. Table of Organization. Refer to Table of Organization 8820 and 8821 managed by Total Force Structure, MCCDC, for current authorized organizational structure and personnel strength for KC-130FRT units. As of this publication date, KC-130F/R/T units are authorized:

Squadron

12 Aircraft

42 Pilots [26 TPC/16 CP (T2P or T3P)]

23 TSOs

25 Flight Engineers

24 Loadmasters

24 Flight Mechanics

Detachment

6 Aircraft

19 Pilots [11 TPC/8 CP (T2P or T3P)]

11 TSOs

12 Flight Engineers

12 Loadmasters

12 Flight Mechanics

5. Core Capability. A core capable squadron is able to sustain 9 sorties on a daily basis during contingency/combat operations. The above sortie rates are based on 3.0 hour average sortie duration and assumes \geq 70 percent FMC aircraft and \geq 90 percent T/O aircrew on hand. If unit FMC aircraft < 70 percent or T/O aircrew < 90 percent, core capability will be degraded by a like percentage. A core capable squadron is able to accomplish all tasks designated in the unit METL from a main or expeditionary base.

6. METL/Core Skill Matrix. KC-130FRT core skills directly support the METL as follows:

	KC-130FRT CORE SKILL										CORE PLUS	
METL	AR	TACNAV	FORM	RGR	LRNAV	THRX (I)	THRX (R)	ALZ	NSQ	AD	LRAR	DEFTAC
A. Conduct Tactical Airlift		X	X		X	X	X	X	X			X
B. Conduct Sea and Air Deployment Operations			X		X	X	X	X	X		X	X
C. Conduct Airborne Operations		X	X		X	X	X		X	X		X
D. Distribute Supplies and Provide Transport Services		X		X	X	X	X	X	X	X	X	X
E. Conduct Air Refueling	X	X	X		X	X	X		X		X	X
F. Exercise Command and Control					X	X	X		X			X
G. Conduct Joint Personnel Recovery	X	X	X	X	X	X	X	X	X	X	X	X
H. Conduct Noncombatant Evacuation	X	X	X	X	X	X	X	X	X		X	X

7. KC-130F/R/T Core Model Minimum Requirements. Squadron core competency reflects the minimum level of competency a squadron must achieve to perform its core capability. Squadron core competency is measured in terms of minimum Core Skill Proficiency (CSP) and minimum numbers of flight leaders per paragraphs a. and b. below:

a. Minimum Unit CSP Requirements. As a minimum, in order to be considered Core Competent, a unit must possess the following numbers of crews who are proficient in each core skill (Unit CSP). In order to be considered proficient in a core skill (individual CSP), a crewmember must attain and maintain proficiency in core skill events, as delineated in paragraphs (1) and (2) below.

* NOTE: DEFTAC and Long-range AAR (LRAR) are core plus skills. Proficiency in DEFTAC and LRAR is not required to obtain unit CSP and will not contribute to unit T-level readiness. Below are KC-130 community recommended unit/individual CSP standards for these skills.

KC-130FRT Unit CSP Requirements							
CORE SKILL *CORE PLUS	Pilot	Co-pilot	TSO	FE	LM	FM	Crews
AR	14	14	14	14	14	14	14
TACNAV	9	9	9	9	9	9	9
FORM	8	8		8			8
LRNAV	12	12	12	12	12	12	12
THRX(I)	6	6	6	6	6	6	6
THRX(R)	8		4	4			4
ALZ	9	9	9	9	9	9	9
RGR	6	6		6	6	6	6
NSQ	9	9	9	9	9	9	9
AD	4	4	4	4	8	4	4
**CPL					18		18
*LRAR	2		2				1
*DEFTAC	2/2		2	2	2	2	2

KC-130FRT Unit CSP Requirements Detachment							
CORE SKILL	Pilot	Co-Pilot	TSO	FE	LM	FM	Crews
AR	7	7	7	7	7	7	7
TACNAV	5	5	5	5	5	5	5
FORM	4	4		4			4
LRNAV	6	6	6	6	6	6	6
THRX(I)	3	3	3	3	3	3	3
THRX(R)	4		2	2			2
ALZ	5	5	5	5	5	5	5
RGR	3	3	3	3	3	3	3
NSQ	5	5	5	5	5	5	5
AD	2	2	2	2	4	2	2
**CPL					9		9
LRAR	1		1				1
DEFTAC	4		2	2	2	2	2

** CPL is the Cargo and Passenger Loading core skill that applies to loadmasters only and is not included in the METL Core Skill Matrix.

(1) Events Required to Attain Individual CSP. To initially attain CSP, a crewmember must successfully complete all of the T&R events listed in the chart below for that core skill:

KC-130 TSO	RW/FW AR	RGR	ALZ EAF	AD	FORM	LONG RANGE NAV	TACNAV	THRX(I)	THRX(R)	NS	LRAR	DEFTAC
T&R event requirements to attain competency	210 212 213		270 271 370	240 241 242 341		250	220 221 222 223 321 322 324	260 261	360 361	201 204 205	410 411	462

(2) Events Required to Maintain Individual CSP. To maintain CSP, a crewmember must maintain proficiency in all of the T&R events listed in the chart below for that core skill.

KC-130 TSO	RW/FW AR	RGR	ALZ EAF	AD	FORM	LONG RANGE NAV	TACNAV	THR(X(I)	THR(X(R)	NS	LRAR	DEFTAC
T&R event requirements to attain competency	210 213		271 370	241 242		250	223 322 324	261	361	204 205	411	462

b. Minimum Combat Leader Requirements. As a minimum, in order to be considered Core Competent, a unit must possess the following numbers of aircrew with the listed flight leadership designations.

KC-130 Leadership Requirements - Squadron						
DESIGNATION	Pilot	Tactical Systems Operator	Flight Engineers	Loadmasters	Flight Mechanics	
TPC	18					
SEC LDR	8					
DIV LDR	4					
TAC RAC	8					
RC		2				
STRAT RAC	2					

KC-130 Leadership Requirements - Detachment						
DESIGNATION	Pilots	Tactical Systems Operator	Flight Engineers	Loadmasters	Flight Mechanics	
TPC	9					
SEC LDR	4					
DIV LDR	2					
TAC RAC	4					
RC		1				
STRAT RAC	1					

8. Qualifications And Designations Table. The table below delineates T&R events required to be completed to attain initial qualifications, re-qualifications, and designations. All stage lectures, briefs, squadron training and prerequisites shall be complete prior to completing final events. Qualification and designation letters signed by the commanding officer shall be placed in individual NATOPS and APR/MPR jackets. Loss of proficiency in all qualification events of a core skill causes the associated qualification to be lost. Regaining a qualification requires completing all R coded syllabus events associated with that qualification.

<u>Qualification</u> (TRACKING CODE)	Initial Event Qualification Requirements.
NSQ (600)	NSFAM-204, NSFAM-205
TSOI (601)	TSOIUT 500, 501, 502 and squadron's recommendation for instructor designation.
NSI (602)	NSIUT 510, 511, 512 and MAWTS-1 certification.
RENDEZVOUS CONTROLLER (610)	AR-410, AR-411
ANNUAL NATOPS (690)	IAW OPNAVINST 3710.7 and an annual qualification letter signed by the commanding officer.
Weapons and Tactics Instructor (691)	Completion of WTI Course of instruction and MAWTS-1 certification.
NATOPS Instructor (692)	RQD-601 and squadron's recommendation for NATOPS evaluator designation.

9. Instructor Requirements. A squadron should possess the following numbers of aircrew with the listed instructor designations per the KC-130 T&R and MCO 3500.12C (WTPP).

KC-130 Squadron						
INSTRUCTOR DESIGNATION	Pilots	Tactical System Operators	Flight Engineers	Loadmasters	Flight Mechanics	
LATI	4					
ANI	6	4	6	4		
WTI	2	2	2	2		
DEFTACI	1					
NSI	3	3	3	3		
T&RI	10	6	10	8		

KC-130 Detachment						
INSTRUCTOR DESIGNATION	Pilots	Tactical System Operators	Flight Engineers	Loadmasters	Flight Mechanics	
LATI	2					
ANI	3	2	3	2		
WTI	1	1	1	1		
DEFTACI	1					
NSI	1	1	1	1		
T&RI	5	3	5	4		

10. Definitions

a. Currency. A control measure used to provide an additional margin of safety based on exposure frequency to a particular skill. It is a measure of time since the last event demanding that specific skill. Loss of currency does not affect a loss of Combat Readiness Percentage (CRP). For example, currency determines minimum altitudes in rules of conduct based upon the most recent low altitude fly date. Specific currency requirements for individual type mission profiles may be found in the Aviation T&R Program Manual.

b. Proficiency. Proficiency is a measure of achievement of a specific skill. Re-fly factors establish the maximum time between demonstration of those particular skills. CRP is a measurement of "demonstrated proficiency." If an aircrew exceeds the re-fly factor for a particular event, the individual loses CRP for that particular event. To regain proficiency, an individual shall complete the delinquent event with a proficient crewman/flight lead. If an entire unit loses proficiency, unit instructors shall regain proficiency by completing an event with instructors from a like unit. If not feasible, the instructor shall regain proficiency by completing the event with another instructor. If a unit has only one instructor and cannot complete the event with an instructor from another unit, he shall regain proficiency with another aircraft commander or as designated by his commanding officer.

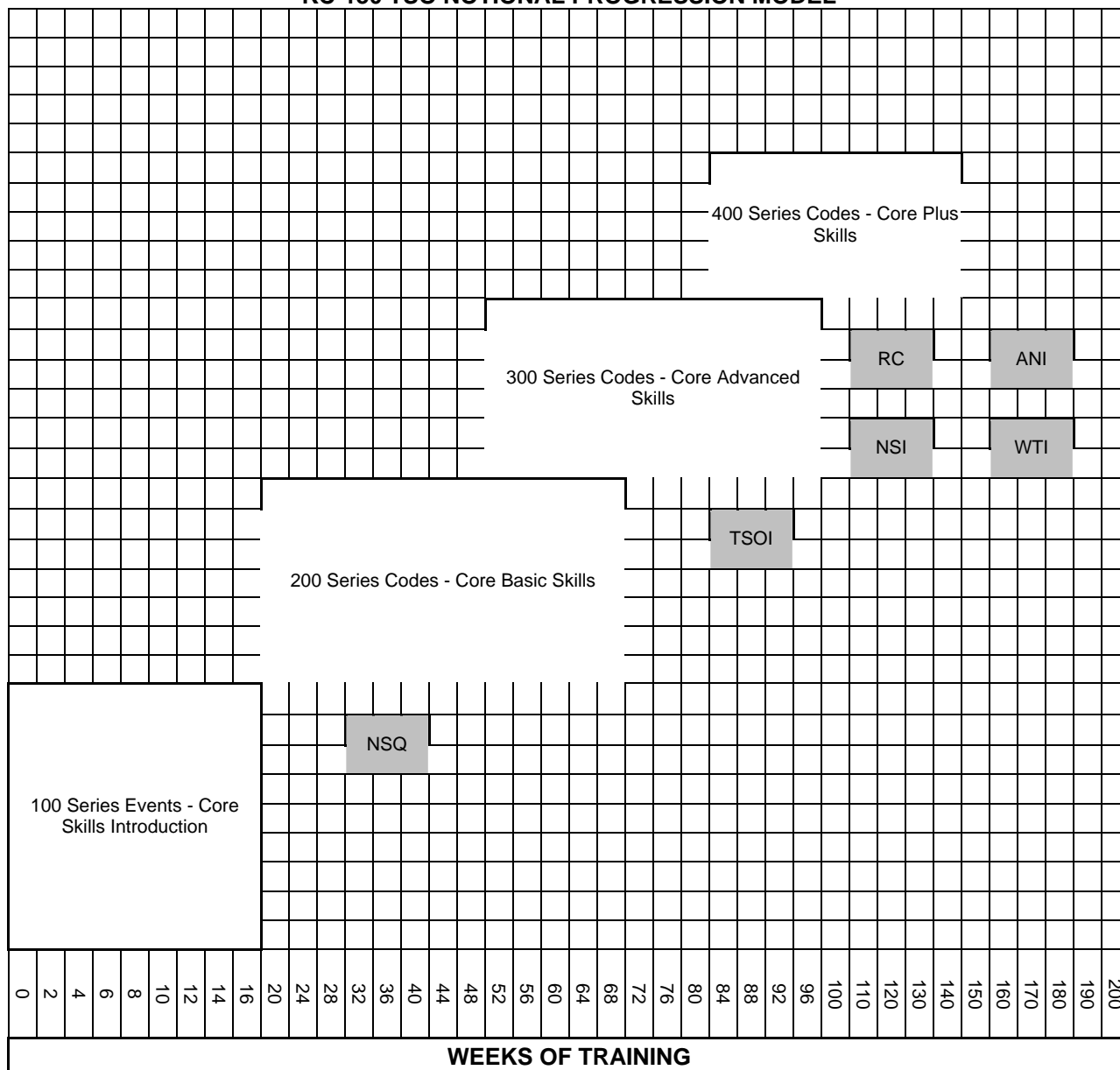
c. Qualification. A qualification is a status assigned to personnel based on demonstration of proficiency in a specific skill. Specific criteria to achieve qualifications shall be delineated in individual T&R chapters. Upon successful completion of qualification criteria, commanding officers may issue an appropriate qualification letter for inclusion in the NATOPS jacket and APR/MPR. Aircrew do not lose a qualification as a function of re-fly factor for individual events. Loss of proficiency (delinquent re-fly factor) for all associated qualification core skill events constitutes loss of that qualification. Re-qualification requires demonstration of proficiency. Specific re-qualification criteria shall be delineated in individual T&R chapters.

d. Designation. A designation is a status assigned to an individual based on leadership ability. A designation is a command specific, one-time occurrence and remains in effect until removed for cause. Specific designation requirements shall be delineated in individual T&R chapters. Commanders shall issue a designation letter to the individual upon the occasion of original designation, with appropriate copies for inclusion in the NATOPS jacket and APR.

11. KC-130FRT TSO Progression Model. The training progression model below provides recommended core skill, qualification, and designation attainment timelines.

KC-130 TACTICAL SYSTEMS OPERATOR (TSO)/MISSION SPECIALIST NOTIONAL PROGRESSION MODEL

KC-130 TSO NOTIONAL PROGRESSION MODEL



301. PROGRAMS OF INSTRUCTION (POI) FOR BASIC TSO

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-2	Squadron Ground Training	Training Squadron
3-16	Core Skill Introduction Training	Training Squadron
17-68	Core Skill Basic Training	Tactical Squadron
52-96	Core Skill Advanced Training	Tactical Squadron
88-140	Core Plus Training	Tactical Squadron

302. POI FOR REFRESHER TSO

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1	Squadron Ground Training	Training Squadron
2-3	Core Skill Basic Training	Training Squadron

310. GROUND TRAINING COURSES OF INSTRUCTION

<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
Naval Aircrew Candidate Course	NAS Pensacola, FL
Marine Aerial Navigators School	Randolph AFB, TX
Survival, Evasion, Resistance and Escape School	NAS Brunswick, ME
Central Altitude Reservation Facility	
Indoctrination ARTCC Facility	Washington, D.C.
Weapons Tactics Instructor (WTI)	MAWTS-1, MCAS Yuma, AZ
Advanced Airlift Tactics Training Course	St Joseph, MO
Combat Air Platform Employment Seminar (CAPES)	Nellis AFB, NV

311. SQUADRON LEVEL TRAINING

Aircraft, Emergency Equipment, and Emergency Procedures Familiarization
 Foreign Clearance Guide Review
 Mission Planning and Fuel Requirements Review
 Radio Navigation and Flight Instruments and RADAR Techniques Review
 Aerial Refueling Review
 Low-level Navigation Techniques Review
 Computer Mission Planning Systems
 TSO's Responsibility During Ground/Airborne Emergencies
 NATOPS Open Book Examination
 NATOPS Closed Book Examination

320. FLIGHT TRAINING. The number of hours depicted in the flight training syllabus is considered to be the optimum instructional hours necessary to accomplish training objectives for each flight.

321. BASIC TSO TRAINING1. Core Skill Introduction Training

<u>STAGE</u>	<u>EVENTS</u> <u>FLT/SIM</u>	<u>HOURS</u> <u>FLT/SIM</u>	<u>CRP</u> <u>FLT/SIM</u>
Basic Qualification	-	-	25.0
Ground Familiarization	0/0	2.0/0.0	0.0/0.0
Overland Familiarization	4/0	8.0/0.0	6.0/0.0
Aerial Refueling Familiarization	3/0	6.0/0.0	9.0/0.0
Low-level Familiarization	3/0	3.0/0.0	9.0/0.0
ICAO/Non-RADAR Navigation	2/0	10.0/0.0	4.0/0.0
TSO Check	1/0	2.0/0.0	7.0/0.0
Total	13/0	31.0/0.0	60.0

2. Core Skill Basic Training

<u>STAGE</u>	<u>EVENTS</u> <u>FLT/SIM</u>	<u>HOURS</u> <u>FLT/SIM</u>	<u>CRP</u> <u>FLT/SIM</u>
Familiarization	3/0	10.0/0.0	3.0/0.0
Aerial Refueling	3/0	6.0/0.0	4.5/0.0
Tactical Navigation	2/2	4.0/4.0	2.0/0.0
Aerial Delivery	2/1	3.0/1.5	2.0/0.0
Long-range Navigation	1/0	5.0/0.0	0.5/0.0
Threat Reaction	1/1	2.0/2.0	1.5/0.0
EAF/ALZ	1/0	1.5/1.5	1.5/0.0
Total	13/4	31.5/9.0	15.0

3. Core Skill Advanced Training

<u>STAGE</u>	<u>EVENTS</u> <u>FLT/SIM</u>	<u>HOURS</u> <u>FLT/SIM</u>	<u>CRP</u> <u>FLT/SIM</u>
Tactical Navigation	3/0	4.0/0.0	9.0/0.0
Aerial Delivery	1/0	1.5/0.0	3.0/0.0
Threat Reaction	1/1	2.0/2.0	4.0/0.0
EAF/ALZ	1/0	1.5/0.0	4.0/0.0
Total	6/1	9.0/2.0	20.0

4. Core Plus Training

<u>STAGE</u>	<u>EVENTS</u> <u>FLT/SIM</u>	<u>HOURS</u> <u>FLT/SIM</u>	<u>CRP</u> <u>FLT/SIM</u>
Aerial Refueling	2/0	6.0/0.0	1.5/0.0
Tactical Navigation	1/0	2.0/0.0	0.7/0.0
Aerial Delivery	3/0	3.0/0.0	2.1/0.0
DEFTAC	1/0	1.5/0.0	0.7/0.0
Total	7/0	12.5/0.0	5.0
TOTAL	39/5	84.0/11.0	100.0

5. Refresher TSO Training

<u>STAGE</u>	<u>EVENTS</u> <u>FLT/SIM</u>	<u>HOURS</u> <u>FLT/SIM</u>
Familiarization	4/0	12.0/0.0
Aerial Refueling	2/0	4.0/0.0
Tactical Navigation	3/0	5.0/0.0
Aerial Delivery	3/0	4.5/0.0
Long-range Navigation	2/0	10.0/0.0
Threat Reaction	2/0	4.0/0.0
EAF/ALZ	2/0	3.0/0.0
NATOPS Check	2/0	4.0/0.0
TOTAL	20/0	46.5/0.0

6. Instructor Under Training (IUT)

<u>STAGE</u>	<u>EVENT</u>	<u>HOURS</u>
	<u>FLT/SIM</u>	<u>FLT/SIM</u>
TSO Instructor	3/0	9.0/0.0
Night System Instructor	3/0	4.5/0.0
Advanced Airlift Tactics Training Course (AATTC), St. Louis, MO.		
Combat Air Platform Employment Seminar (CAPES), Nellis AFB, NV.		

330. EVENT PERFORMANCE REQUIREMENTS

1. Route Selection. Route selection should offer maximum variations in en route conditions.

2. Crew Seat. The trainee is required to occupy the TSO's position in the flight station on all syllabus training flights.

3. Refly Intervals. Syllabus refly intervals are located in figure 3-2. Core Skill Introduction events (100 series) are one-time events and are not repeated. A TSO returning from a DIFDEN tour exceeding 12 months should complete the Refresher syllabus.

4. Crew Resource Management (CRM). A qualified and designated CRM Instructor shall conduct initial CRM Training. Annual CRM Training shall be conducted per OPNAVINST 1542.7. CRM shall be briefed for all flights and/or events.

5. Simulator Training. Approved IFARS WST simulators are contained in OPNAVINST 3710.7_. If an approved simulator is not available, then the simulator events are not required for stage training completion.

6. Event Conditions. Flights annotated with N shall be flown at night without NVDs. Flights annotated with (N) may be flown at night without NVDs. Flights annotated with NS shall be flown at night utilizing NVDs. Flights annotated with (NS) may be flown at night utilizing NVDs.

331. CORE SKILL INTRODUCTION TRAINING1. General

a. Ground Familiarization. Ground familiarization shall be completed prior to beginning the Familiarization stage. At the end of this stage of training the trainee will be:

- (1) Able to perform a pre/post-flight of the KC-130.
- (2) Able to demonstrate the proper use of all emergency equipment and procedures per Part V of the KC-130 NATOPS Manual.
- (3) Familiar with current FLIP and FCG procedures.

2. Familiarization

a. Purpose. Familiarize the TSO trainee with the location and operation of navigation equipment aboard the KC-130 aircraft and associated publications. Introduce publications, forms, and procedures relative to airways/random route flying. Specifically, at the end of this stage the trainee will be able to:

- (1) Perform a complete pre/post-flight of the aircraft navigation equipment and publications.

(2) Understand and use current flight information publications, en route charts, and airways logs.

(3) Select the best route of flight by means of weather analysis. Properly complete and file the [DD-175](#) Form.

(4) Understand basic radio/ICS procedures and obtain flight clearances by UHF/VHF radio.

(5) Understand basic RADAR operation with ground and weather interpretation.

(6) Use the ADF, VOR, TACAN, GPS, and INS as navigational aids.

(7) Explain/perform emergency procedures on all sorties as they pertain to the TSO.

(8) File a flight plan with and obtain a weather briefing from a Flight Service Station via phone or UHF/VHF radio.

(9) Understand crew coordination and the duties of the TSO as a crewmember of the aircraft.

b. General. Current planning procedures as defined in current flight publications shall be utilized.

(1) Trainee will receive a minimum of 2 cross-country flights to an airfield more than 1 hour from home station. During these missions the trainee will be required to file a flight plan and obtain a weather brief at destination airfield.

(2) Current planning procedures as defined in current flight publications shall be utilized.

c. Ground Training. Trainee will have completed the required ground training, to include CRM Training, prior to the first flight.

d. Flight Training (4 Flights, 8.0 Hours)

FAM-100 2.0 1 KC-130 A

Goal. Introduce the trainee to all KC-130 overland duties.

Requirement. Perform a complete pre/post-flight inspection of the aircraft navigation equipment and publications. Understand and use current flight information publication en route charts and airways log.

Performance Standard. Per NATOPS, FLIP, Squadron SOP, OPNAVINST 3710.7_ and FRS Student Flight Guide.

Prerequisite. Complete ground instruction and receive aircraft familiarization training.

Ordinance. None.

External Syllabus Support. None.

FAM-1012.01 KC-130 A

Goal. Familiarize the trainee with all KC-130 overland navigation aids and duties.

Requirement. Obtain a DD-175-1 weather brief. Select the best route of flight by means of weather analysis. Properly complete and file a DD-175 flight plan. Obtain flight clearance via UHF/VHF radio. Explain the requirements and procedures for an emergency ground evacuation. Understand the basic RADAR operation with ground and weather interpretation. Demonstrate and refine training included in FAM-100.

Performance Standard. Per NATOPS, FLIP, Squadron SOP, OPNAVINST 3710.7_ and FRS Student Flight Guide.

Prerequisite. FAM-100.

Ordinance. None.

External Syllabus Support. None.

FAM-1022.0R 1 KC-130 A

Goal. Refine KC-130 TSO skills and responsibilities.

Requirement. Understand basic ICS/radio procedures. Use ADF, VOR, TACAN, INS, and GPS as navigation aids. Explain the TSO's duties during all in-flight emergencies. Explain and perform the procedures for all in-flight and ground emergencies. Demonstrate mission planning ability to include: fuel planning, departure/destination alternates, and weather minimum criteria. Demonstrate and refine training contained in FAM-100 and FAM-101.

Performance Standard. Per NATOPS, FLIP, Squadron SOP, OPNAVINST 3710.7_ and FRS Student Flight Guide.

Prerequisite. FAM-101.

Ordinance. None.

External Syllabus Support. None.

FAM-1032.0R, E 1 KC-130 A

Goal. Qualify the trainee to fly local overland non-tactical training missions without an instructor TSO aboard the aircraft.

Requirement. Perform overland navigation flight planning and crew duties. Understand crew coordination and the duties of the TSO as a crewmember in the aircraft. The trainee shall have flown 2 cross-country flights and demonstrated the ability to identify and avoid hazardous weather during this stage of training.

Performance Standard. Per NATOPS, FLIP, Squadron SOP, OPNAVINST 3710.7 and FRS Student Flight Guide.

Prerequisite. FAM-102.

Ordinance. None.

External Syllabus Support. None.

3. Aerial Refueling

a. Purpose. To introduce the TSO trainee to air-to-air refueling procedures, mission planning, and crew coordination. At the end of this stage the trainee will be able to perform TSO duties associated with local refueling missions above 5,000 ft AGL.

b. General

(1) The trainee will observe the refueling mission from the TSO's position and from the observer's position.

(2) Flights should be accomplished in local refueling areas.

(3) Introduce all appropriate navigation aids (APX, Air-to-Air TACAN, UHF/DF) and join-up procedures.

c. Ground Training. Trainee will review the Aerial Refueling Class prior to this stage.

d. Flight Training (3 Flights, 6.0 Hours)

AR-110 2.0 1 KC-130 A

Goal. Introduce fixed wing air-to-air refueling procedures.

Requirement. On local refueling missions, the trainee will observe air-to-air refueling procedures and maintain the aircraft's position.

Performance Standard. Per NATOPS, Air-to-Air Refueling Manual, and FRS Student Flight Guide.

Prerequisite. FAM-103.

Ordinance. None.

External Syllabus Support. Fixed wing receivers required.

AR-111 2.0 1 KC-130 A

Goal. Introduce helicopter air-to-air refueling procedures.

Requirement. On local refueling missions, the trainee will observe helicopter air-to-air refueling procedures and maintain the aircraft's position.

Performance Standard. Per NATOPS, Air-to-Air Refueling Manual, and FRS Student Flight Guide.

Prerequisite. FAM-103.

Ordinance. None.

External Syllabus Support. Rotary wing receivers required.

AR-112

2.0

1 KC-130 A

Goal. Refine air-to-air refueling procedures.

Requirement. On local refueling missions, the trainee will observe air-to-air refueling procedures and maintain the aircraft's position.

Performance Standard. Per NATOPS, Air-to-Air Refueling Manual, and FRS Student Flight Guide.

Prerequisite. 110 and 111

Ordinance. None.

External Syllabus Support. Fixed wing or rotary wing receivers required.

4. Low-level Navigation

a. Purpose. To introduce the trainee to low-level navigation. At the end of this stage the trainee will be able to:

(1) Construct a low-level chart per current procedures and directives.

(2) Maintain the aircraft position and direct the aircraft on a low-level route utilizing terrain and cultural features.

(3) Act as the primary TSO utilizing all available internal navigation equipment during 1 low-level syllabus flight.

b. General

(1) Training shall be conducted in VMC.

(2) All flights will be flown in accordance with T&R Program Manual altitude criteria.

(3) Emphasize position awareness and time control.

c. Ground Training. Trainee must have completed the Low-level Navigation Techniques Review prior to this stage.

d. Flight Training (3 Flights, 3.0 Hours)

LL-120

1.0

1 KC-130 A

Goal. Introduce TSO responsibilities on low-level missions.

Requirement

(1) Familiarize trainee with low-level navigation utilizing terrain, cultural features, NAVAIDs, and with TSO duties.

(2) The low-level route shall consist of a minimum of 6 pre-selected points.

Performance Standard. Per TACMAN, AIRNAVMAN, and FRS Student Flight Guide.

Prerequisite. FAM-103.

Ordinance. None.

External Syllabus Support. None.

LL-121 1.0 1 KC-130 A

Goal. Refine TSO responsibilities on low-level missions.

Requirement

(1) Familiarize trainee with all low-level navigation aids and TSO duties.

(2) The low-level route shall consist of a minimum of 6 pre-selected points.

Performance Standard. Per TACMAN, AIRNAVMAN, and FRS Student Flight Guide.

Prerequisite. LL-120.

Ordinance. None.

External Syllabus Support. None.

LL-122 1.0 1 KC-130 A

Goal. Perform low-level planning and act as the primary TSO while navigating a low-level mission.

Requirement

(1) Refine training included in LL-120 and LL-121.

(2) The low-level route shall consist of a minimum of 6 pre-selected points.

Performance Standard. Per TACMAN, AIRNAVMAN, and FRS Student Flight Guide.

Prerequisite. LL-121.

Ordinance. None.

External Syllabus Support. None.

5. ICAO/Non-RADAR Familiarization

a. Purpose. To provide the trainee an opportunity to develop the proficiency and confidence required for safe extended ICAO/Non-RADAR flight. At the end of this stage the trainee will be able to:

(1) Integrate all available navigation aids.

(2) Use aircraft RADAR for fixing and/or weather avoidance.

(3) Correctly determine the required fuel load, ensuring fuel consumption and corresponding progress toward destination are within safe limits.

b. General

(1) Flights shall be accomplished in an ICAO environment on a multi-national itinerary with a minimum of one 5-hour route each.

(2) Flights will be designed to allow the trainee to develop proficiency and practice integrating all available navigational aids.

c. Ground Training. Trainee will review all classes relating to navigation in an ICAO/non-RADAR environment.

d. Flight Training (2 Flights, 10.0 Hours)

ICAO-150 5.0 1 KC-130 A (N)

Goal. Integrate all available navigation aids emphasizing INS and GPS operations in a global environment.

Requirement. The trainee will demonstrate the ability to perform mission planning in an ICAO environment and to determine aircraft position within FLIP tolerances.

Performance Standard. Per NATOPS, FLIP, ICAO, and FRS Student Flight Guide.

Prerequisite. FAM-103.

Ordinance. None.

External Syllabus Support. None.

ICAO-151 5.0 R 1 KC-130 A (N)

Goal. Integrate all available navigation aids emphasizing INS and GPS operations in a global environment.

Requirement. The trainee will demonstrate the ability to perform mission planning in an ICAO environment and to determine aircraft position within FLIP tolerances.

Performance Standard. Per NATOPS, FLIP, ICAO, and FRS Student Flight Guide.

Prerequisite. ICAO-150.

Ordinance. None.

External Syllabus Support. None.

6. TSO Check

a. Purpose. To determine that the trainee has achieved the minimum NATOPS requirements as a TSO aboard the KC-130 aircraft.

b. General

(1) A designated KC-130 TSO NATOPS Instructor shall evaluate this flight.

(2) Upon completion, the trainee will be designated as qualified and receive the MOS 7372.

c. Ground Training. Trainee must successfully complete the NATOPS open and closed book examinations prior to this flight.

d. Flight Training (1 Flight, 2.0 Hours)

TSOCK-190 2.0 R, E 1 KC-130 A (N)

Goal. Qualify the trainee as a Core Skill Introduction complete TSO in the KC-130 aircraft.

Requirement. The trainee shall demonstrate the ability to meet the NATOPS requirement for a Core Skill Introduction TSO aboard the KC-130 aircraft.

Performance Standard. Per NATOPS, FLIP, and FRS Student Flight Guide.

Prerequisite. 112, 122, and 151.

Ordinance. None.

External Syllabus Support. None.

332. CORE SKILL BASIC TRAINING1. General

a. This phase of instruction covers basic core skills to include: NSQ, AR, TACNAV, AD, LRNAV, THRX(I), and ALZ.

b. The TSO under instruction shall receive the appropriate MAWTS-1 Course Catalog Academic Support Package (ASP) lectures prior to the appropriate stage of training.

c. For AR-210, AR-213, and ALZ-271, a TSO NSI is required only if the initial sortie is conducted using NVDs and the TSO under instruction is not NSQ. A TSOI who is NSQ may instruct an NSQ TSO on initial AR-210, AR-213, and ALZ-270 events flown using NVDs. Any TSOI may instruct these events during the day or unaided.

d. All instructors must be proficient in the event to instruct.

e. To fly an event aided without an instructor, the TSO must be NSQ and proficient in the given event.

2. Familiarization

a. Purpose. This stage of training will familiarize the TSO with local squadron procedures and introduce the TSO to the use and wear of NVDs.

b. General. Emphasize planning, briefing, pre-flight procedures, and CRM.

c. Ground Training. None.

d. Flight Training (3 Flights, 10.0 Hours)

FAM-201 4.0 1 KC-130 A (N)

Goal. Introduce the TSO to local area and squadron operating procedures.

Requirement. Execute a local flight, concentrating on local course rules procedures per station orders, squadron and TSO SOPs.

Performance Standard. Per local and squadron directives, NATOPS, FLIP, and ICAO procedures.

Prerequisite. TSOCK-190. The TSO will review the squadron and TSO SOPs prior to this flight and shall successfully complete a local course rules examination.

Ordnance. None.

External Syllabus Support. None.

NSFAM-204 3.0 1 KC-130 A NS

Goal. Introduce the TSO to the use and wear of NVDs under High Light Level (HLL) conditions with emphasis on NVD pre-flight, in-flight donning, and CRM.

Requirement. The TSO will plan and fly a non-tactical NVD sortie under HLL conditions. The TSO shall be introduced to: NVD emergency procedures, proper NVD scanning techniques, terrain recognition, atmospheric impact on NVD performance, and visual acuities associated with HLL conditions. A pilot NSI, a flight engineer NSI, or a TSO NSI may instruct this sortie.

Performance Standard. Demonstrate the ability to function as a TSO per NATOPS utilizing NVDs under HLL.

Prerequisite. FAM-201. Must complete Night Lab and complete NVD I and NVD II MAWTS-1 ASPs.

Ordnance. None.

External Syllabus Support. None.

NSFAM-205 3.0 1 KC-130 A NS

Goal. Introduce the TSO to the use and wear of NVDs under Low Light Level (LLL) conditions with emphasis on NVD pre-flight, in-flight donning, and CRM.

Requirement. The TSO will plan and fly a non-tactical NVD sortie under LLL conditions. The TSO shall refine proper NVD scanning techniques, be introduced to terrain recognition, atmospheric impact on NVD performance, and visual acuities associated with LLL conditions. A pilot NSI, a flight engineer NSI, or a TSO NSI may instruct this sortie.

Performance Standard. Demonstrate the ability to function as a TSO per NATOPS utilizing NVDs under LLL conditions.

Prerequisite. NSFAM-204.

Ordinance. None.

External Syllabus Support. None.

3. Aerial Refueling

a. Purpose. To develop the TSO's knowledge, understanding, and proficiency required for the various types of air-to-air refueling missions.

b. General

(1) Aircraft should have an operating APX, UHF/DF, A/A TACAN, and weather RADAR.

(2) For AR-210 and AR-213, a TSO NSI is required only if the initial sortie is conducted using NVDs and the TSO under instruction is not NSQ. A TSOI who is NSQ may instruct a NSQ TSO on initial AR-210 and AR-213 events flown using NVDs. Any TSOI may instruct these events during the day or unaided.

c. Ground Training. The TSO will review air-to-air refueling procedures in the NATOPS and the Air-to-Air Refueling (AAR) Manual.

d. Flight Training (3 Flights, 6.0 Hours)

<u>AR-210</u>	<u>2.0</u>	<u>1 KC-130 A (N)</u>
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Goal. Refine skills required to plan, brief, and execute a fixed wing/tilt rotor air-to-air refueling mission.

Requirement. Perform TSO duties on a fixed wing/tilt rotor air-to-air-refueling mission per NATOPS. A TSO NSI is required only if the initial sortie is conducted using NVDs and the TSO under instruction is not NSQ. A TSOI who is NSQ may instruct a NSQ TSO on the initial event flown using NVDs. Any TSOI may instruct these events during the day or unaided.

Performance Standard. Arrive at an ARCP at ARCT (+/- 1 min) and maintain aircraft position within assigned refueling airspace.

Prerequisite. FAM-201.

Ordinance. None.

External Syllabus Support. Fixed wing/tilt rotor receivers required.

<u>AR-212</u>	<u>2.0</u>	<u>1 KC-130 A</u>
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Goal. Refine skills required to plan, brief, and execute a day rotary wing air-to-air refueling mission.

Requirement. Perform TSO duties on a day rotary wing air-to-air refueling mission.

Performance Standard. Locate the receiver using RADAR, APX, UHF/DF, and/or A/A TACAN. Conduct a minimum of two (2) head-on offset and one (1) running, enroute rendezvous.

Prerequisite. FAM-201.

Ordinance. None.

External Syllabus Support. Rotary wing receivers required.

AR-213

2.0

1 KC-130 A N (NS)

Goal. Introduce skills required to plan, brief, and execute a night rotary wing air-to-air refueling mission.

Requirement. Perform TSO duties on a night rotary wing air-to-air refueling mission. A TSO NSI is required only if the initial sortie is conducted using NVDs and the TSO under instruction is not NSQ. A TSOI that is NSQ may instruct a NSQ TSO on the initial event flown using NVDs.

Performance Standard. Locate the receiver using RADAR, APX, UHF/DF, and/or A/A TACAN. Conduct a minimum of two (2) head-on offset and one (1) running, enroute rendezvous.

Prerequisite. AR-212.

Ordinance. None.

External Syllabus Support. Rotary wing receivers required.

4. Tactical Navigation

a. Purpose. To develop the TSO's knowledge and proficiency in tactical navigation.

b. General. Emphasize: computer-based mission planning systems, RADAR terrain mapping, terrain masking, threat avoidance, time, and course control.

c. Ground Training. The TSO will review the appropriate KC-130 TACMAN chapters on low-level and low altitude tactics operations.

d. Flight and Simulator Training (2 Flights, 4.0 Hours/2 Sims, 4.0 Hours)

TACNAV-220

2.0

WST S

Goal. Refine skills required to plan, brief, and execute a tactical low-level sortie.

Requirement

(1) Perform TSO duties on a tactical low-level sortie.

(2) Review route planning and chart preparation procedures emphasizing checkpoint selection, use of intermediate checkpoints, limiting features, prominent terrain features, and airspace control measures.

(3) Conduct a route brief.

(4) Navigate along a low-level route consisting of a minimum

of six (6) pre-selected checkpoints integrating all available navigation aids.

(5) Discuss CRM considerations during tactical operations.

Performance Standard. Maintain aircraft position within route width and arrive at a pre-selected checkpoint within +/- 30 seconds of a pre-determined TOT.

Prerequisite. FAM-201.

Ordinance. None.

External Syllabus Support. None.

TACNAV-221

2.0 1 KC-130 A

Goal. Refine skills required to plan, brief, and execute a tactical, low-level sortie.

Requirement

(1) Perform TSO duties on a tactical, low-level sortie.

(2) Review route planning and chart preparation procedures emphasizing checkpoint selection, use of intermediate checkpoints, limiting features, prominent terrain features, and airspace control measures.

(3) Conduct a route brief.

(4) Navigate along a low-level route consisting of a minimum of six (6) pre-selected checkpoints integrating all available navigation aids.

(5) Discuss CRM considerations during tactical operations.

Performance Standard. Maintain aircraft position within route width and arrive at a pre-selected checkpoint within +/- 30 seconds of a pre-determined TOT.

Prerequisite. FAM-201 and TACNAV-220.

Ordinance. None.

External Syllabus Support. None.

TACNAV-222

2.0 WST S NS

Goal. Introduce skills required to plan, brief, and execute a HLL night systems, tactical, low-level sortie.

Requirement

(1) Perform TSO duties under HLL conditions on a tactical, low-level sortie.

(2) Introduce the tactical advantages and administrative restrictions associated with HLL conditions.

(3) Review route planning and chart preparation procedures emphasizing checkpoint selection, use of intermediate checkpoints, limiting features, prominent terrain features, and airspace control measures during HLL conditions.

(4) Conduct a route brief.

(5) Navigate along a low-level route consisting of a minimum of six (6) pre-selected checkpoints integrating all available navigation aids.

(6) Discuss CRM considerations during tactical operations.

Performance Standard. Maintain aircraft position within route width and arrive at a pre-selected checkpoint within +/- 30 seconds of a pre-determined TOT.

Prerequisite. NSFAM-204.

Ordinance. None.

External Syllabus Support. None.

TACNAV-223

2.0 R 1 KC-130 A NS

Goal. Introduce skills required to plan, brief, and execute a HLL night systems, tactical, low-level sortie.

Requirement

(1) Perform TSO duties under HLL conditions on a tactical, low-level sortie.

(2) Introduce the tactical advantages and administrative restrictions associated with HLL conditions.

(3) Review route planning and chart preparation procedures emphasizing checkpoint selection, intermediate checkpoints, limiting features, prominent terrain features, and airspace control measures during HLL conditions.

(4) Conduct a route brief.

(5) Navigate along a low-level route consisting of a minimum of six (6) pre-selected checkpoints integrating all available navigation aids.

(6) Discuss CRM considerations during tactical operations.

Performance Standard. Maintain aircraft position within route width and arrive at a pre-selected checkpoint within +/- 30 seconds of a pre-determined TOT.

Prerequisite. NSFAM-204 and TACNAV-222.

Ordinance. None.

External Syllabus Support. None.

5. Aerial Delivery

a. Purpose. To instruct the TSO in aerial delivery techniques. At the end of this stage the TSO will be able to compute an air delivery release point, understand all checklists and time warnings, and call the airdrop.

b. General. Initial instruction should be conducted by a WTI or ANI.

c. Ground Training. The TSO shall review the TACMAN chapter pertaining to aerial delivery and receive instruction on Computed Air Release Point (CARP) computations per Air Force Instruction (AFI) 11-231.

d. Flight and Simulator Training (2 Flights, 3.0 Hours/1 Sim, 1.5 Hours)

AD-240

1.5

WST S

Goal. Introduce air delivery techniques and navigation procedures to release points in connection with static-line personnel and cargo aerial delivery.

Requirement.

(1) Perform TSO duties on an aerial delivery sortie.

(2) Review route planning and chart preparation procedures emphasizing release point computation, aerial delivery limitations, drop zone criteria, aerial delivery checklists and emergency procedures, slow-down procedures, and ingress/egress options.

(3) Plan a route to a drop zone and compute a static-line, CDS, and a HE CARP.

(4) Conduct an objective area brief to include planned release point, drop zone hazards, IP inbound, slow-down, and egress.

(5) Navigate to a drop zone, relay all time warnings, call a static-line personnel, a CDS and an HE aerial delivery, and navigate an egress route.

(6) Discuss CRM considerations during aerial delivery operations.

Performance Standard. Must compute and execute a static-line personnel, a CDS, and an HE aerial delivery that lands within drop zone safety criteria.

Prerequisite. FAM-201.

Ordinance. None.

External Syllabus Support. None.

AD-241

1.5

R 1 KC-130 A

Goal. Refine air delivery techniques and navigation procedures to release points in connection with cargo aerial delivery.

Requirement

- (1) Perform TSO duties on a cargo aerial delivery sortie.
- (2) Review route planning and chart preparation procedures emphasizing release point computation, aerial delivery limitations, drop zone criteria, aerial delivery checklists, emergency procedures, slow-down procedures, and ingress/egress options.
- (3) Plan a route to a drop zone and compute a CDS and an HE CARP.
- (4) Conduct an objective area brief to include planned release point, drop zone hazards, IP inbound, slow-down, and egress.
- (5) Navigate to a drop zone, relay all time warnings, call a CDS or HE aerial delivery, and navigate an egress route.
- (6) Discuss CRM considerations during aerial delivery operations.

Performance Standard. Must compute and execute a CDS or HE aerial delivery that lands within drop zone safety criteria.

Prerequisite. AD-240.

Ordinance. None.

External Syllabus Support. Aerial Delivery Platoon or equivalent, material handling equipment and support personnel, a DZ team to include a corpsman, and a drop zone survey per MCO 3500.20. A PPN-19/SMP-2000 is recommended but not required.

AD-242

1.5 R 1 KC-130 A

Goal. Introduce air delivery techniques and navigation procedures to release points in connection with low-altitude static-line personnel aerial delivery.

Requirement

- (1) Perform TSO duties on a static-line personnel aerial delivery sortie.
- (2) Review route planning and chart preparation procedures. Emphasize release point computation, aerial delivery limitations, drop zone criteria, aerial delivery checklists, emergency procedures, slow-down procedures, and ingress/egress options.
- (3) Plan a route to a drop zone and compute a CARP.
- (4) Conduct an objective area brief to include planned release point, drop zone hazards, IP inbound, slow-down, and egress.
- (5) Navigate to a drop zone, relay all time warnings, call a static-line personnel aerial delivery, and navigate an egress route.

(6) Discuss CRM considerations during aerial delivery operations.

Performance Standard. Jumpers must land within drop zone safety criteria.

Prerequisite. AD-240.

Ordinance. None.

External Syllabus Support. Aerial delivery qualified personnel, a DZ team to include a corpsman, and a drop zone survey per MCO 3500.20. A PPN-19/SMP-2000 is recommended but not required.

6. Long-range Navigation Familiarization

a. Purpose. Refine the TSO's proficiency and confidence required for safe extended ICAO/Non-RADAR flight. Specifically, at the end of this stage the TSO will be able to:

(1) Integrate all available navigation aids.

(2) Use the aircraft's RADAR for fixing and/or weather avoidance as necessary.

(3) Correctly determine the required planned ramp, ensuring fuel consumption and corresponding progress toward destination are within safe limits.

b. General. This flight shall be accomplished in an ICAO environment on a multi-national itinerary with a minimum of one 5-hour route.

c. Ground Training. The TSO will review procedures for ICAO flight to include the FLIP and FCG.

d. Flight Training (1 Flight, 5.0 Hours)

<u>LRNAV-250</u>	<u>5.0</u>	<u>R 1 KC-130 A (N) (NS)</u>
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Goal. Integrate all available navigation aids emphasizing INS and GPS operations in a global environment.

Requirement. The TSO will demonstrate the ability to perform mission planning in an ICAO environment and to determine the aircraft's position within FLIP tolerances.

Performance Standard. Per NATOPS, FLIP, ICAO, and FCG procedures.

Prerequisite. FAM-201.

Ordinance. None.

External Syllabus Support. None.

7. IR Threat Reaction

a. Purpose. To train the TSO in the skills required to operate the KC-130 Aircraft Survivability Equipment (ASE) suite in a tactical scenario in an IR MANPAD/small arms surface to air threat environment.

b. General

(1) Aircraft should have a fully operational ASE suite.

(2) Appropriate decoy flares shall be loaded prior to each flight.

c. Ground Training. The TSO shall receive instruction on the IR/MANPAD threat, IR counter-tactics, decoy flare characteristics and effectiveness, capabilities and limitations of the AAR-47, ALE-39/47, and ALQ-157.

d. Flight and Simulator Training (1 Flight, 2.0 Hours/1 Sim, 2.0 Hours)

THR-X-260

2.0

WST S

Goal. Introduce the planning considerations and in-flight operation of the ASE systems with emphasis on setup of the system for automatic and continuous defense against an IR/MANPAD, SPEERS, and small arms surface to air threat.

Requirement

(1) Perform TSO duties associated with the operation of the ASE suite in order to counter an IR/MANPAD and small arms surface to air threat.

(2) Plan and configure the ASE suite to counter an IR/MANPAD and small arms surface to air threat.

(3) Introduce the basic concepts of various flare load-out configurations and decoy flare capabilities and limitations. Introduce programming and operation of the ALE-39/47 CMDS.

(4) Discuss the ALQ-157 IR jammer codes and power up/power down procedures.

(5) Discuss the AAR-47s capabilities and limitations.

(6) Discuss IR/MANPAD and small arms counter-tactics to include appropriate expendables and maneuvers for a specific threat.

(7) Discuss CRM considerations for operations in a threat environment.

(8) Deploy expendables using both the remote dispensing switches and master switch.

(9) Eight (8) passes shall be made against a simulated IR/MANPAD threat system and appropriate maneuvers and countermeasures initiated.

Performance Standard. Must correctly configure and operate the ASE suite, use appropriate terminology, and initiate appropriate defensive responses to threat indications.

Prerequisite. FAM-201 and TACNAV-220.

Ordinance. None.

External Syllabus Support. None.

THR-261

2.0 R 1 KC-130 A (N) (NS)

Goal. Refine the planning considerations and in-flight operation of the ASE systems with emphasis on setup of the system for automatic and continuous defense against an IR/MANPAD and small arms surface to air threat.

Requirement

- (1) Perform TSO duties associated with the operation of the ASE suite in order to counter an IR/MANPAD and small arms surface to air threat.
- (2) Plan and configure the ASE suite to counter an IR/MANPAD and small arms surface to air threat.
- (3) Demonstrate a basic understanding of various flare load-out configurations and decoy flare capabilities and limitations. Demonstrate the ability to program and operate the ALE-39/47 CMDS.
- (4) Demonstrate an understanding of the ALQ-157 IR jammer codes and power up/power down procedures.
- (5) Demonstrate an understanding of the AAR-47 capabilities and limitations.
- (6) Discuss IR/MANPAD and small arms counter-tactics to include appropriate expendables and maneuvers for a specific threat.
- (7) Discuss CRM considerations for operations in a threat environment.
- (8) Deploy expendables using both the remote dispensing switches and master switch.
- (9) Four (4) engagements shall be made against a simulated IR/MANPAD threat system and appropriate maneuvers and countermeasures initiated.

Performance Standard. Must correctly configure and operate the ASE suite, use appropriate terminology and initiate appropriate defensive responses to threat indications.

Prerequisite. FAM-201 and TACNAV-221.

Ordinance. 300 decoy flares.

External Syllabus Support. SUAS permitting deployment of decoy flares. An EW range with Smokey SAM teams, AAR-47 stimulators and debrief capabilities greatly enhance aircrew training and should be used to the maximum extent possible.

8. Expeditionary Airfield (EAF)/Assault Landing Zone Operations (ALZ)

a. Purpose. To develop skills to plan and navigate to VFR airfields (including unimproved ALZs) and conduct a self-contained approach.

b. General. Flights shall be accomplished in day or night VMC.

c. Ground Training. The TSO shall review the TACMAN chapter regarding ALZ operations, and receive instruction on self-contained approach construction.

d. Flight and Simulator Training (1 Flight, 1.5 Hours/1 Sim, 1.5 Hours)

ALZ-270

1.5

WST S

Goal. Introduce the planning considerations and the construction of a self-contained approach plate.

Requirement

(1) Introduce SCA planning criteria, emphasizing ALZ requirements, terrain avoidance considerations, construction of the SCA plate, obstacle clearance criteria, slow down calculation, missed approach planning, the threat, and day/night/NS considerations.

(2) Construct a SCA approach plate.

(3) Conduct a SCA to an ALZ integrating all available navigation aids. The TSO will provide advisories to the pilots throughout the approach phase from initial descent to touchdown.

(4) The TSO will not have access to visual navigation aids during training.

Prerequisite. FAM-201 and TACNAV-220.

Performance Standard. Successfully execute at least four (4) self-contained approaches to two (2) different runways, using two (2) different ingress altitudes, with at least 1 missed approach.

External Syllabus Support. None.

ALZ-271

1.5

R 1 KC-130 A (N) (NS)

Goal. Refine the planning considerations and execution of a self-contained approach.

Requirement

(1) Demonstrate an understanding of SCA planning criteria, emphasizing ALZ requirements, terrain avoidance considerations, construction of the SCA plate, obstacle clearance criteria, slow down calculation, missed approach planning, the threat, and day/night/NS considerations.

(2) Construct a SCA approach plate.

(3) Conduct a SCA to an ALZ integrating all available navigation aids. The TSO will provide advisories to the pilots throughout the approach phase from initial descent to touchdown.

(4) The TSO will not have access to visual navigation aids during training.

Prerequisite. FAM-201 and TACNAV-221.

Performance Standard. For initial training, successfully execute at least four (4) self-contained approaches to two (2) different runways, using two (2) different ingress altitudes, with at least 1 missed approach.

External Syllabus Support. MMT, STS, EAF and/or CFR as required.

333. CORE SKILL ADVANCED TRAINING

1. General

a. This phase of instruction trains the TSO in advanced core skills to include: TACNAV, AD, THRX(R), and ALZ.

b. The TSO under instruction shall receive the appropriate MAWTS-1 ASP lectures prior to the appropriate stage of training.

c. A TSO NSI is required to instruct initial AD-341.

d. All instructors must be proficient in the events they instruct.

e. To fly an event aided without an instructor, the TSO must be NSQ and proficient in the given event.

2. Tactical Navigation

a. Purpose. Refine TSO's knowledge and proficiency in advanced tactical navigation, introduce LAT, and familiarize the TSO with the phenomena peculiar to flight at or near the comfort level.

b. General. Emphasize: computer-based mission planning systems, RADAR terrain mapping, terrain masking, threat assessment and avoidance, time, and course control.

c. Ground Training. The TSO will review the KC-130 TACMAN for low-level and LAT operations.

d. Flight and Simulator Training (3 Flights, 4.0 Hours)

TACNAV-321

1.0

1 KC-130 A

Goal. Introduce skills required to plan, brief, and execute a tactical, low-level sortie in a LAT environment.

Requirement

(1) Perform TSO duties on a tactical, low-level sortie in the LAT environment.

(2) Review route planning and chart preparation procedures emphasizing threat assessment and avoidance, terrain masking, checkpoint selection, and airspace control measures.

(3) Conduct a route brief.

(4) Navigate along an approved LAT route consisting of a minimum of six (6) pre-selected checkpoints integrating all available navigation aids and maximizing use of terrain to degrade detection and enhance survivability.

(5) Discuss CRM considerations during operations at or near crew comfort level.

Performance Standard. Maintain awareness of aircraft position within route width/airspace during LAT maneuvering.

Prerequisite. TACNAV-221.

Ordinance. None.

External Syllabus Support. None.

TACNAV-322

1.0 R 1 KC-130 A

Goal. Demonstrate skills required to plan, brief, and execute a tactical, low-level sortie in a LAT environment.

Requirement

(1) Perform TSO duties on a tactical, low-level sortie in the LAT environment.

(2) Demonstrate an understanding of route planning and chart preparation procedures emphasizing threat assessment and avoidance, terrain masking, checkpoint selection, and airspace control measures.

(3) Conduct a route brief.

(4) Navigate along an approved LAT route consisting of a minimum of six (6) pre-selected checkpoints integrating all available navigation aids and maximizing use of terrain to degrade detection and enhance survivability.

(5) Discuss CRM considerations during operations at or near crew comfort level.

Performance Standard. Maintain aircraft position within route width and arrive at a pre-selected checkpoint within +/- 30 seconds of a pre-determined TOT during LAT maneuvering.

Prerequisite. TACNAV-321.

Ordinance. None.

External Syllabus Support. None.

TACNAV-324 2.0 R 1 KC-130 A NS

Goal. Introduce skills required to plan, brief, and execute a tactical, low-level sortie under LLL conditions.

Requirement

(1) Perform TSO duties on a tactical, low-level sortie under LLL conditions.

(2) Introduce the tactical advantages and administrative restrictions associated with LLL conditions.

(3) Review night route planning and chart preparation procedures emphasizing checkpoint selection, altitude planning, use of intermediate checkpoints, limiting features, prominent terrain features, and airspace control measures during night operations.

(4) Conduct a route brief.

(5) Navigate along a low-level route consisting of a minimum of six (6) pre-selected checkpoints integrating all available navigation aids.

(6) Discuss CRM considerations associated with tactical NS operations.

Performance Standard. Maintain aircraft position within route width and arrive at a pre-selected checkpoint within +/- 30 seconds of a pre-determined TOT.

Prerequisite. TACNAV-223.

Ordinance. None.

External Syllabus Support. None.

3. Aerial Delivery

a. Purpose. To demonstrate a thorough understanding of advanced aerial delivery techniques.

b. General. Instruction should be conducted by a TSO NSI.

c. Ground Training. The TSO will review the KC-130 TACMAN for aerial delivery operations.

d. Flight Training (1 Flight, 1.5 Hours)

AD-341 1.5 R 1 KC-130 A NS

Goal. Refine air delivery techniques and navigation procedures to release points in connection with static-line personnel or cargo aerial delivery utilizing NVDs.

Requirement

(1) Perform TSO duties on a static-line personnel or cargo aerial delivery sortie on NVDs.

(2) Review route planning and chart preparation procedures emphasizing NS considerations to release point computation, aerial delivery limitations, drop zone criteria, aerial delivery checklists and emergency procedures, slow-down procedures, and ingress/egress options.

(3) Plan a route to a drop zone and compute a CARP.

(4) Conduct an objective area brief to include planned release point, drop zone hazards and markings, IP inbound, slow-down, and egress.

(5) Navigate to a drop zone, relay all time warnings, call an aerial delivery, and navigate an egress route utilizing NVDs.

(6) Discuss CRM considerations during NS aerial delivery operations.

Performance Standard. Must compute and execute an aerial delivery that lands within drop zone safety criteria.

Prerequisite. AD-241/242 and RQD-600.

Ordinance. None.

External Syllabus Support. Aerial Delivery Platoon or equivalent, material handling equipment and support personnel as required, a DZ team to include a corpsman, and a drop zone survey per MCO 3500.20. A PPN-19/SMP-2000 is recommended but not required.

4. RADAR Threat Reaction

a. Purpose. To train the TSO in the skills required to operate the KC-130 ASE suite in a tactical scenario in a RADAR threat environment.

b. General

(1) Aircraft should have a fully operational ASE suite.

(2) Appropriate chaff and decoy flares shall be loaded prior to each flight.

c. Ground Training. The TSO shall receive instruction on the RADAR threat, RADAR counter-tactics, chaff characteristics and effectiveness, and capabilities and limitations of the ALE-39/47 and APR-39.

d. Flight and Simulator Training (1 Flight, 2.0 Hours/1 Sim, 2.0 Hours)

THR-360

2.0

WST S

Goal. Introduce the planning considerations and in-flight operation of the ASE systems with emphasis on configuration of the system for operations in a RADAR threat environment.

Requirement

(1) Perform TSO duties associated with operation of the ASE suite in order to counter a RADAR threat.

(2) Plan and configure the ASE suite to counter a RADAR threat.

(3) Introduce the basic concepts of various chaff and flare load-out configurations, and capabilities and limitations of decoy chaff and flare. Refine programming and operation of the ALE-39/47 CMDS.

(4) Introduce APR-39 operation emphasizing Operational Flight Program (OFP), Emitter Identification Database (EID), and threat symbology.

(5) Discuss the AAR-47 capabilities and limitations as it applies to the RADAR threat.

(6) Discuss RADAR threat counter-tactics to include appropriate expendables and maneuvers for a specific threat.

(7) Discuss CRM considerations for operations in a threat environment.

(8) Deploy expendables in response to a RADAR threat indication.

(9) Conduct multiple passes against simulated RADAR threat systems and initiate appropriate maneuvers and countermeasures.

Performance Standard. Must correctly configure and operate the ASE suite, use appropriate terminology, and initiate correct defensive responses to threat indications.

Prerequisite. THR-260.

Ordinance. None.

External Syllabus Support. None.

THR-361

2.0 1 KC-130 A (N) (NS)

Goal. Refine the planning considerations and in-flight operation of the ASE systems with emphasis on configuration of the system for operations in a RADAR threat environment.

Requirement

(1) Perform TSO duties associated with the operation of the ASE suite in order to counter a RADAR threat.

(2) Plan and configure the ASE suite to counter a RADAR threat.

(3) Refine the understanding of the basic concepts of various chaff and flare load-out configurations, capabilities and limitations of decoy chaff and flare. Refine programming and operation of the ALE-39/47 CMDS.

(4) Introduce APR-39 operation emphasizing OFP), EID, and threat symbology.

(5) Discuss the AAR-47 capabilities and limitations as it applies to the RADAR threat.

(5) Discuss RADAR threat counter-tactics to include appropriate expendables and maneuvers for a specific threat.

(6) Discuss CRM considerations for operations in a threat environment.

(7) Deploy expendables in response to a RADAR threat indication.

(8) Conduct multiple passes against simulated RADAR threat systems and initiate appropriate maneuvers and countermeasures.

Performance Standard. Must correctly configure and operate the ASE suite, use appropriate terminology, and initiate correct defensive responses to threat indications.

Prerequisite. THRX-261.

Ordinance. 240 chaff.

External Syllabus Support. An operable EW range allowing chaff dispensing. An EW range with debrief facilities greatly enhance aircrew training and should be used to the maximum extent possible.

5. Expeditionary Airfield/Temporary Landing Zone (EAF)/(ALZ)

a. Purpose. To refine the skills necessary to plan and navigate to airfields emphasizing ingress/egress and approach profiles.

b. General. ALZ-370 shall be accomplished in day or night VMC conditions.

c. Ground Training. The TSO shall review the KC-130 TACMAN chapters concerning ALZ operations.

d. Flight Training (1 Flight, 1.5 Hours)

<u>ALZ-370</u>	<u>1.5</u>	<u>1 KC-130 A (N) (NS)</u>
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Goal. To refine the skills necessary to plan and navigate to airfields emphasizing ingress/egress and approach profiles in a threat environment.

Requirement

(1) Demonstrate an understanding of the various ingress and approach options to an airfield in a threat environment including SCA, random high, random low/shallow, straight-in, teardrop, and abeam approaches.

(2) Demonstrate an understanding of SCA planning considerations associated with the various threat environments.

(3) Discuss the advantages and disadvantages of various egress profiles.

(4) Plan and execute multiple ingresses to an airfield to include: random high, random low/shallow, straight-in, teardrop, and abeam approaches; compute slowdown and descent points for the various approaches.

Prerequisite. TLZ-270.

Performance Standard. For initial training, execute a random high, random low/shallow, straight-in, teardrop, and an abeam approach.

External Syllabus Support. MMT, STS, EAF and/or CFR as required.

334. CORE PLUS TRAINING

1. General

a. This phase of instruction trains to core plus skills to include: AAR, TACNAV, AD, and DEFTAC.

b. The TSO under instruction shall receive the MAWTS-1 course catalog ASP lecture prior to the appropriate stage of training.

c. All instructors must be proficient in the event to instruct.

d. To fly an event aided without an instructor, the TSO must be NSQ and proficient in the given event.

2. Air-to-Air Refueling

a. Purpose

(1) To develop the necessary skills to perform the tasks required of the lead TSO and rendezvous controller on a long-range air-to-air refueling mission.

(2) To designate the TSO as a "Rendezvous Controller" after successful completion of AR-411.

b. General

(1) Flights shall be conducted in conjunction with a movement of receiver aircraft in either a ferry, deep air strike profile (fixed wing), or long-range insert profile (rotary wing/tilt rotor) requiring a refueling area commander.

(2) The TSO shall have demonstrated an ability to plan and execute long-range air-to-air refueling missions including ALTRV or other airspace coordination measures.

c. Ground Training. The TSO should have completed the Central Altitude Reservation Indoctrination Course and shall receive instruction on Rendezvous Control Procedures prior to this stage.

d. Flight Training (2 Flights, 6.0 Hours)

AR-4103.01 KC-130 A (N) (NS)

Goal. To refine the skills required to assist in planning and leading a long-range, air-to-air refueling mission.

Requirement

- (1) Assist the rendezvous controller in planning and coordinating a long-range, air-to-air refueling mission.
- (2) Introduce the planning and coordination associated with an ALTRV.
- (3) Demonstrate the ability to use an ALTRV.
- (4) Use appropriate navigation aids to arrive at an ARCP and maintain course on a refueling track.

Performance Standard. Direct aircraft to arrive at the ARCP and assist the rendezvous controller in conducting a successful rendezvous with receiver aircraft.

Prerequisite. If fixed wing/tilt rotor - AR-210, if rotary wing day - AR-212, rotary wing night - AR-213, if NS - RQD-600.

Ordinance. None.

External Syllabus Support. Fixed wing or rotary wing receivers required.

AR-4113.0R E 1 KC-130 A (N) (NS)

Goal. To demonstrate the skills required to plan and execute a long-range, air-to-air refueling mission and prepare the TSO for rendezvous controller designation.

Requirement

- (1) Plan and conduct a long-range, air-to-air refueling mission to include receiver fuel requirements, tanker requirements, abort criteria, track location and administrative requirements.
- (2) Demonstrate a thorough understanding of ALTRV procedures to include message requirements, coordination, and filing procedures.
- (3) Conduct the planning and coordination of an ALTRV or other airspace required to facilitate the long-range movement of receiver aircraft.

Performance Standard. Conduct a successful long-range, air-to-air refueling mission.

Prerequisite. AR-410. If fixed wing/tilt rotor - AR-210, if rotary wing day - AR-212, rotary wing night - AR-213, if NS - RQD-600.

Ordinance. None.

External Syllabus Support. Fixed wing or rotary wing receivers required.

3. Tactical Navigation

a. Purpose. Refine knowledge and proficiency in advanced tactical navigation and familiarize the TSO with the phenomena peculiar to flight at night without NVDs.

b. General. Emphasize: night considerations in the low-level environment, computer-based mission planning systems, RADAR terrain mapping, terrain masking, threat assessment and avoidance, and time and course control.

c. Ground Training. Review the appropriate KC-130 TACMAN chapters for low-level and LAT operations.

d. Flight and Simulator Training (1 Flight, 2.0 Hours)

TACNAV-422

2.0

1 KC-130 A N

Goal. Introduce skills required to plan, brief, and execute a night unaided, tactical, low-level sortie.

Requirement

(1) Perform TSO duties on an unaided, night, tactical, low-level sortie.

(2) Introduce the tactical advantages and administrative restrictions associated with night operation.

(3) Review night route planning and chart preparation procedures emphasizing checkpoint selection, altitude planning, use of intermediate checkpoints, limiting features, prominent terrain features, and airspace control measures during night operations.

(4) Conduct a route brief.

(5) Navigate along a low-level route consisting of a minimum of six (6) pre-selected checkpoints integrating all available navigation aids.

(6) Discuss CRM considerations associated with tactical night operations.

Performance Standard. Maintain aircraft position within route width and arrive at a pre-selected checkpoint within +/- 30 seconds of a pre-determined TOT.

Prerequisite. TACNAV-324.

Ordinance. None.

External Syllabus Support. None.

4. Aerial Delivery

a. Purpose. To demonstrate a thorough understanding of advanced aerial delivery techniques in the night environment.

b. General. Instruction should be conducted by a WTI or ANI. For AD-442, a TSO NSI is required only if the initial sortie is conducted using NVDs and the TSO under instruction is not NSQ. A TSOI who is NSQ may instruct a NSQ TSO on initial AD-442 event flown using NVDs. Any TSOI may instruct this event during the day or unaided.

c. Ground Training. The TSO will review the appropriate KC-130 TACMAN chapters for aerial delivery and battlefield illumination.

d. Flight Training (3 Flights, 3.0 Hours)

AD-440 1.0 1 KC-130 A N

Goal. Introduce air delivery techniques and navigation procedures to release points in connection with static-line personnel or cargo aerial delivery at night without NVDs.

Requirement

(1) Perform TSO duties on a static-line personnel or cargo aerial delivery sortie at night without NVDs.

(2) Review route planning and chart preparation procedures emphasizing night considerations to release point computation, aerial delivery limitations, drop zone criteria, aerial delivery checklists and emergency procedures, slow-down procedures, and ingress/egress options.

(3) Plan a route to a drop zone and compute a CARP.

(4) Conduct an objective area brief to include: a planned release point, drop zone hazards, markings, IP inbound, slow-down, and egress.

(5) Navigate to a drop zone, relay all time warnings, call an aerial delivery, and navigate an egress route at night without NVDs.

(6) Discuss CRM considerations associated with night, unaided aerial delivery operations.

Performance Standard. Must compute and execute an aerial delivery that lands within drop zone safety criteria.

Prerequisite. AD-341.

Ordinance. None.

External Syllabus Support. Aerial Delivery Platoon or equivalent, material handling equipment and support personnel as required, a DZ team to include a corpsman, and a drop zone survey per MCO 3500.20. A PPN-19/SMP-2000 is recommended but not required.

AD-4421.01 KC-130 A (N)

Goal. Conduct aerial delivery of personnel/cargo utilizing high altitude release techniques with emphasis on HARP computations and navigation to release points.

Requirement

- (1) Perform TSO duties on a high altitude aerial delivery sortie.
- (2) Review route planning and chart preparation procedures emphasizing high altitude release point computation, aerial delivery limitations, drop zone criteria, aerial delivery checklists, emergency procedures, slow-down procedures, and ingress/egress options.
- (3) Plan a route to a drop zone and compute a high altitude aerial delivery of personnel or cargo.
- (4) Conduct an objective area brief to include planned release point, drop zone hazards, IP inbound, slow-down, and egress.
- (5) Navigate to a release point, relay all time warnings, call a high altitude aerial delivery of personnel or cargo, and navigate an egress route.
- (6) Discuss CRM considerations during aerial delivery operations.
- (7) Discuss physiology considerations appropriate to high altitude aerial delivery operations.

Performance Standard. Compute and execute a high altitude aerial delivery that lands within drop zone safety criteria.

Prerequisite. AD-240.

Ordinance. None.

External Syllabus Support. High altitude certified personnel or cargo, a DZ team to include a corpsman, an aviation physiologist (if required), and a drop zone survey per MCO 3500.20. A PPN-19/SMP-2000 is recommended but not required.

AD-4441.01 KC-130 A N

Goal. Instruct the TSO in the skills necessary to perform battlefield illumination.

Requirement

- (1) Perform TSO duties on a battlefield illumination sortie.
- (2) Review route planning and chart preparation procedures emphasizing release point computation, APF delivery characteristics, orbit and delivery patterns, battlefield illumination checklists, emergency procedures, slow-down procedures, and ingress/egress options.

(3) Direct the aircraft to a target area and compute an APF CARP.

(4) Conduct an objective area brief to include planned release point, illumination patterns, slow-down, and egress.

(5) Navigate to a release point, relay all time warnings, call a release of APFs, and navigate an egress route.

(6) Discuss CRM considerations during battlefield illumination operations.

Performance Standard. For initial sortie conduct at least 1 area illumination pattern and 1 point target illumination pattern utilizing a standoff orbit, providing the desired illumination effect on the target.

Prerequisite. FAM-201.

Ordinance. 20 LUU-2/19 APF.

External Syllabus Support. SUAS permitting deployment of APFs.

5. Defensive Tactics (DEFTAC)

a. Purpose. To introduce the TSO to DEFTAC.

b. General

(1) Emphasize DEFTAC maneuvering and CRM considerations during DEFTAC.

(2) A Pilot DEFTACI or TSOI may instruct this event.

(3) The aircraft should have an operable ASE suite.

c. Ground Training. Prior to this flight phase the TSO shall review the appropriate KC-130 TACMAN chapters on DEFTAC.

d. Flight Training (1 Flight, 1.5 Hours)

DEFTAC-462

1.0

1 KC-130 A

Goal. Familiarize the TSO with the skills and crew coordination required while executing DEFTAC against aggressor aircraft.

Requirement

(1) Demonstrate an understanding of KC-130 defensive maneuvers.

(2) Demonstrate an understanding of air-to-air threat.

(3) During DEFTAC, demonstrate the proper maneuver calls and crew coordination.

(4) Discuss the use of the ASE suite to counter an air-to-air threat.

Performance Standard. Demonstrate proper crew coordination during DEFTAC.

Prerequisite. TACNAV-322.

Ordinance. None.

External Syllabus Support. Rear Vision Device (RVD) and aggressor aircraft required.

335. INSTRUCTOR TRAINING

1. General. The TSO IUT shall receive the MAWTS-1 ASP Courseware on Student Briefing and Critique, and Student/Instructor Roles prior to beginning this stage of training.

2. TSO Instructor (TSOI)

a. Purpose. To standardize TSOI procedures.

b. General

(1) Emphasize standardization and the ability to instruct TSO procedures.

(2) Ability to instruct all phases of flight training shall be evaluated in which the TSO has previously demonstrated proficiency.

(3) A TSO Assistant NATOPS Instructor shall evaluate these flights.

c. Flight Training (4 Flights, 12.0 Hours)

<u>TSOIUT-500</u>	<u>3.0</u>	<u>E 1 KC-130 A (N)</u>
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Goal. Evaluate and standardize the TSO's instructional techniques on an LRNAV event.

Requirement. Instruct a TSO on LRNAV-250.

Performance Standard. Effectively instruct the skills necessary to complete the appropriate event.

Prerequisite. LR-250 and the squadron's recommendation for TSOI designation.

Ordinance. None.

External Syllabus Support. None.

<u>TSOIUT-501</u>	<u>3.0</u>	<u>E 1 KC-130 A (N)</u>
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Goal. Evaluate and standardize instructional techniques on an AR event.

Requirement. Instruct a TSO on an AR event.

Performance Standard. Effectively instruct the skills necessary to complete the appropriate event.

Prerequisite. Proficiency in appropriate event and the squadron's recommendation for TSOI designation.

Ordinance. None.

External Syllabus Support. Fixed wing, rotary wing, or tilt-rotor receivers required.

TSOIUT-502 3.0 E 1 KC-130 A (N)

Goal. Evaluate and standardize instructional techniques on a TACNAV, AD, THRX, or ALZ event.

Requirement. Instruct a TSO on a TACNAV, AD, THRX, or ALZ event.

Performance Standard. Effectively instruct the skills necessary to complete the appropriate event.

Prerequisite. Proficiency in appropriate event and the squadron's recommendation for TSOI designation.

Ordinance. As required.

External Syllabus Support. As required.

3. TSO Night Systems Instructor (NSI)

a. Purpose. To qualify the TSO as an NSI.

b. General. A MAWTS-1 instructor shall provide certification for this qualification.

c. Ground Training. The TSO shall review instructions from the MAWTS-1 ASP on Night Vision Device Usage.

d. Flight Training (4 Flights, 6.0 Hours)

NSIUT-510 1.5 E 1 KC-130 A NS

Goal. Evaluate and standardize the NSIUT's instructional techniques on an NS FAM event.

Requirement. Instruct a TSO on an NS FAM event.

Prerequisite. RQD-601, proficiency in the appropriate event, and squadron recommendation for NSI designation.

Performance Standard. Effectively instruct the skills necessary to complete the appropriate event.

Ordinance. None.

External Syllabus Support. None.

NSIUT-511 1.5 E 1 KC-130 A NS

Goal. Evaluate and standardize NSIUT instructional techniques on a NS low-level event.

Requirement. Instruct a TSO on a NS low-level event.

Performance Standard. Effectively instruct the skills necessary to complete the appropriate event.

Prerequisite. TSO NSI-510.

Ordinance. None.

External Syllabus Support. None.

NSIUT-512

1.5 E 1 KC-130 A NS

Goal. Evaluate and standardize NSIUT instructional techniques on an NS AD event.

Requirement. Instruct a TSO on an NS AD event.

Performance Standard. Effectively instruct the skills necessary to complete the appropriate event.

Prerequisite. TSO NSI-510.

Ordinance. None.

External Syllabus Support. As required.

350. REQUIREMENTS, QUALIFICATIONS, AND DESIGNATIONS (RQD)

1. Instructor Qualifications

RQD-600

1.5 E R 1 KC-130 A NS

Goal. TSO NS qualification flight. The TSO will demonstrate the required skills to fly a mission while utilizing NVGs.

Requirement

(1) The NSQ training syllabus consists of NSFAM-204, NSFAM-205, and RQD-600. NSFAM-204 and NSFAM-205 may be instructed by a pilot NSI, flight engineer NSI, or TSO NSI. RQD-600 shall be instructed by a TSO NSI on a separate sortie after completion of NSFAM-205.

(2) Perform TSO duties while utilizing NVGs.

(3) High or low light level conditions.

(4) Plan, brief, fly, and debrief an NVG sortie with a TSO NSI as the evaluator.

(5) Demonstrate an understanding of NS operations, an understanding of NS training rules, and the ability to conduct an NVG sortie.

(6) Completion of RQD-600 meets the requirements for the TSO to be NS qualified. At the discretion of the squadron commanding officer, a letter assigning the TSO as NS qualified shall be placed in the NATOPS jacket and APR. The tracking code of RQD-600 shall be logged.

Performance Standard. Plan and conduct a NS sortie.

Prerequisite. 205.

Ordinance. As required.

External Syllabus Support. As required.

RQD-601

3.0 1 KC-130 A (N)

Goal. Certification event for designation as a TSOI.

Requirement. Demonstrate the ability to instruct TSOs on standardized procedures. Completion of RQD-601 meets the requirements for the TSO to be qualified as an instructor. At the discretion of the squadron commanding officer, a letter assigning the TSO as an instructor shall be placed in the NATOPS jacket and APR. The tracking code of RQD-601 shall be logged.

Performance Standard. Instruct the skills necessary to complete the appropriate event.

Prerequisite. TSO IUT-500, 501, 502, and proficiency in the appropriate event.

Ordinance. As required.

External Syllabus Support. As required.

RQD-602

1.5 1 KC-130 A NS

Goal. Certification event for designation as a TSO NSI.

Requirement. Demonstrate the ability to instruct TSOs on standardized procedures during an NS event. Completion of RQD-602 meets the requirements for the TSO to be qualified as a NS instructor. At the discretion of the squadron commanding officer, a letter assigning the TSO as an NSI shall be placed in the NATOPS jacket and APR. The tracking code of RQD-602 shall be logged.

Performance Standard. Instruct the skills necessary to complete the appropriate event.

Prerequisite. TSO IUT-510, 511, and 512.

Ordinance. As required.

External Syllabus Support. As required.

2. Rendezvous Controller

RQD-610

Goal. Tracking code for rendezvous controller.

Requirement. Completion of AR-411 meets the requirements for the TSO to be qualified as a rendezvous controller. At the discretion of the squadron commanding officer, a letter assigning the TSO as a rendezvous controller shall be placed

in the NATOPS jacket and APR. The tracking code of RQD-610 shall be logged.

3. TSO Annual Re-qualification

- a. Purpose. To conduct annual NATOPS re-qualification.
- b. General. A NATOPS/Assistant NATOPS Instructor shall evaluate this flight.
- c. Ground Training. Pass the open and closed book examinations per NATOPS prior to the flight.
- d. Flight Training (1 Flight, 2.0 Hours)

<u>RQD-690</u>	<u>2.0</u>	<u>E R 1 KC-130 A (N)(NS)</u>
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Goal. Annual NATOPS re-qualification check.

Requirement. The TSO will be tested on all previous instruction, knowledge of emergency procedures, and proper operation of all navigation equipment.

Performance Standards. The TSO will perform all duties, emergency procedures, and properly operate all navigation equipment per NATOPS, OPNAVINST 3710.7, all applicable orders and directives, and squadron and TSO SOPs. Completion of RQD-690 meets the requirements for the TSO to be re-qualified as a TSO. At the discretion of the squadron commanding officer, a letter re-designating the TSO shall be placed in the NATOPS jacket and APR. The tracking code of RQD-690 shall be logged.

Prerequisite. Proficiency in appropriate event for which the TSO is being evaluated.

Ordinance. As required.

External Syllabus Support. As required.

4. Weapons Tactics Instructor (WTI)

a. Purpose. To certify the TSOI as a WTI capable of conducting ground and airborne instruction in the TSO Core Skill Advanced and Core Plus flight syllabi as outlined in this Manual.

b. General. The KC-130 WTI Course is developed by MAWTS-1 and is conducted in conjunction with the WTI Course. Upon graduation the candidate will be certified by MAWTS-1 as a WTI TSO. WTI designation may be made by the squadron commanding officer.

c. Ground Training. Receive all instruction per the MAWTS-1 Course Of Instruction.

d. Flight Training. All flights conducted per MAWTS-1 Course Of Instruction.

<u>RQD-691</u>	<u>Per MAWTS-1 Course of Instruction</u>
----------------	------------------------------------------

Goal. Develop WTIs for the squadron.

Requirement. Use standard WTI instruction techniques as taught at the MAWTS-1 WTI course. Completion of WTI Course meets the requirements for the TSO to be qualified as a WTI. At the discretion of the squadron commanding officer, a letter assigning the TSO as a WTI shall be placed in the NATOPS jacket and APR. The tracking code of RQD-691 shall be logged.

Performance Standard. Per MAWTS-1 WTI Course Of Instruction.

Prerequisite. Per MAWTS-1 WTI Planning Guide.

Ordinance. As required.

External Syllabus Support. As required.

5. NATOPS Instructor Check (NTPSI)

a. Purpose. To standardize NTPSI procedures.

b. General

(1) Emphasize standardization of instruction procedures.

(2) An assistant NATOPS evaluator will be evaluated by instructing the senior squadron NATOPS evaluator.

(3) The senior NATOPS evaluator will be evaluated by instructing the group NATOPS evaluator.

c. Flight Training (1 Flight, 3.0 Hours)

RQD-692 3.0 E 1 KC-130 A (N)

Goal. Standardize NTPSI procedures.

Requirement. Evaluate an assistant NATOPS instructor using standardized procedures.

Performance Standard. Per NATOPS and all current flight publications. Completion of RQD-692 meets the requirements for the TSO to be qualified as an NATOPS Instructor. At the discretion of the squadron commanding officer, a letter assigning the TSO as an NI shall be placed in the NATOPS jacket and APR. The tracking code of RQD-692 shall be logged.

Prerequisite. RQD-601.

Ordinance. As required.

External Syllabus Support. As required.

360. EXPENDABLE ORDNANCE REQUIREMENTS

<u>ORDNANCE</u>	<u>100</u> <u>Series</u>	<u>200</u> <u>Series</u>	<u>300</u> <u>Series</u>	<u>400</u> <u>Series</u>	<u>Refresher</u>	<u>ANNUAL</u>
DECOY FLARES		300	60			360
CHAFF			240			240
LUU-2/19				20		10

361. SYLLABUS MATRIX

AIRCRAFT: KC-130		MOS: 7372/7380			CREW POSITION: TSO				
TRAINING		REFLY							
STAGE	CODE	HRS	INTERVAL	CRP	T	C	R	E	REMARKS
CORE SKILL INTRODUCTION TRAINING									
FAM	100	2.0	*	1.5					
	101	2.0	*	1.5					
	102	2.0	*	1.5			X		
	103	2.0	*	1.5			X	X	
AR	110	2.0	*	3.0					
	111	2.0	*	3.0					
	112	2.0	*	3.0					
LL	120	1.0	*	3.0					
	121	1.0	*	3.0					
	122	1.0	*	3.0					
ICAO	150	5.0	*	2.0					(N)
	151	5.0	*	2.0			X		(N)
TSOCK	190	2.0	*	7.0			X	X	(N)
CORE SKILL BASIC TRAINING									
FAM	201	4.0	365	1.0			X		(N)
	204	3.0	365	1.0			X		NS
	205	3.0	365	1.0			X		NS
AR	210	2.0	365	1.5			X		(N)
	212	2.0	365	1.5					
	213	2.0	365	1.5			X		N (NS)
TACNAV	220	2.0	*	0.0					S
	221	2.0	365	1.0					
	222	2.0	*	0.0					S NS
	223	2.0	180	1.0			X		NS
AD	240	1.5	*	0.0					S
	241	1.5	270	1.0			X		
	242	1.5	270	1.0			X		
LRNAV	250	5.0	720	0.5			X		(N)
THRX	260	2.0	*	0.0					S
	261	2.0	365	1.5			X		(N)
ALZ	270	1.5	*	0.0					S
	271	1.5	365	1.5			X		(N)

AIRCRAFT: KC-130		MOS: 7372/7380		CREW POSITION: TSO						
TRAINING			REFLY							REMARKS
STAGE	CODE	HRS	INTERVAL	CRP	T	C	R	E		
CORE SKILL ADVANCED TRAINING										
TACNAV	321	1.0	*	3.0						
	322	1.0	365	3.0			X			
	324	2.0	180	3.0			X			NS
AD	341	1.5	270	3.0			X			NS
THR	360	2.0	*	0.0						S
	361	2.0	365	4.0			X			(N) (NS)
ALZ	370	1.5	365	4.0			X			(N) (NS)
CORE PLUS TRAINING										
AR	410	3.0	1095	0.7						(N) (NS)
	411	3.0	1095	0.8						(N) (NS)
TACNAV	422	2.0	180	0.7						N
AD	440	1.0	270	0.7						N
	442	1.0	365	0.7						(N)
	444	1.0	730	0.7						N
DEFTAC	462	1.0	730	0.7						
INSTRUCTOR TRAINING										
TSO IUT	500	3.0	*	0.0				X		(N)
	501	3.0	*	0.0				X		(N)
	502	3.0	*	0.0				X		(N)
TSO NSI	510	1.5	*	0.0				X		NS
	511	1.5	*	0.0				X		NS
	512	1.5	*	0.0				X		NS
REQUIREMENTS, QUALIFICATION, AND DESIGNATIONS (RQD)										
RQD	600	1.5	*	0.0			X	X		NS
	601	3.0	*	0.0				X		(N)
	602	3.0	*	0.0						NS
	610	3.0	*	0.0				X		(N) (NS)
	690	2.0	365	0.0			X	X		(N) (NS)
	691	PER MAWTS-1 Course of Instruction								
	692	1.5	365	0.0				X		(N)

362. T&R CHAINING TABLES. Event chaining allows for the completion of more complex and/or advanced events using the same skills to update proficiency status of events. Only events in a sequence entailing demonstration of equivalent skills shall be chained.

a. When a T&R event is logged, the proficiency dates of other T&R events (usually lower in number) may be updated. The T&R code that is logged is known as the "chaining code," and the updated codes are "chained codes." Chained codes are not always updated when a chaining code is logged.

b. Conditional Chaining. The following environmental conditions further specify which T&R codes are chain-updated.

(1) Night Optional. Chained codes annotated with parentheses around them, e.g. (200), are only chain-updated if the chaining code is flown at night.

(2) Night Systems Optional. Chained codes annotated with parentheses and "NS" after them, e.g. (200 NS), are only chain-updated if the chaining code is flown using night systems.

(3) Light Level Optional. Chained codes annotated with parentheses and "HLL" after them, e.g. (200 HLL), are only chain-updated if the chaining code is flown using night systems during a high light level period. Chained codes annotated with parentheses and "LLL" after them, e.g. (200 LLL), are only chain-updated if the chaining code is flown using night systems during a low light level period.

c. Syllabus Event Conversion Matrix. The syllabus event conversion matrix is used to convert T&R syllabus event proficiency status of the previous T&R syllabus into event proficiency status of the current T&R for individuals.

MOS 7372/7380 FLIGHT UPDATE CHAINING

<u>FLIGHT</u>	<u>FLIGHTS UPDATED</u>
201	
204	201
205	204, 201
210	201
212	201
213	212, (204 HLL), (205 LLL)
220	
221	201
222	
223	221, 204, 201
240	
241	242, 201
242	241, 201
250	201, (204 HLL), (205 LLL)
260	
261	201, (204 HLL), (205 LLL)
270	
271	201, (204 HLL), (205 LLL)
321	221, 201
322	321, 221, 201
324	223, 221, 205, 201
341	201, (204 HLL), (205 LLL)
360	
361	261, 201, (204 HLL), (205 LLL)
370	271, 201, (204 HLL), (205 LLL)
410	201, (204 HLL), (205 LLL)
411	410, 201, (204 HLL), (205 LLL)
422	324, 223, 221, 201
440	341
442	201, (204 HLL), (205 LLL)
444	201, (204 HLL), (205 LLL)
462	201
500	201
501	201
502	201
510	201, (204 HLL), (205 LLL)
511	201, (204 HLL), (205 LLL)
512	201, (204 HLL), (205 LLL)
600	201, (204 HLL), (205 LLL)
601	201
602	201, (204 HLL), (205 LLL)
610	201, (204 HLL), (205 LLL)
690	201, (204 HLL), (205 LLL)
691	201
692	201

Old Stage	Old Trng Code	New Stage	New Trng Code
200 Level			
CR	200	FAM	201, 250
AR	210	AR	210
AR	211	AR	212
AR	212	AR	213
LL	220	TACNAV	220, 221
LL	221	TACNAV	422
AD	240	AD	240, 242
AD	241	AD	240, 241
AD	242	AD	240, 241
TLZ	270	ALZ	270, 271
RGR	271	-	-
300 Level			
AR	310	-	-
AR	311	-	-
AR	312	AR	410
AD	340	AD	440
AD	341	AD	440
AD	342	AD	442
AD	343	AD	444
ASE	360	-	-
TLZ	370	ALZ	370
400 Level			
AR	410	AR	411, 610
LAT	430	TACNAV	321
LAT	431	TACNAV	322
DEFTAC	432	DEFTAC	462
ASE	460	THRX	260, 261
ASE	461	THRX	360, 361
500 Level			
TSO	590	RQD	601
NSI	591	RQD	602
WTI	592	RQD	691
NTPSI	593	RQD	692
600 Level			
NVG	601	NSFAM	204
NVG	602	-	-
NVG	603	TACNAV	324, 223, 222
NVG	604	-	-
NVG	605	NSFAM	205
	605	RQD	600
NVG	610	-	-
NVG	630	-	-
NVG	640	AD	341
NVG	670	-	-
SAR	680	-	-
TSOCK	690	RQD	690

T&R MANUAL, KC-130FRT

CHAPTER 4

KC-130FRT LOADMASTER

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CHAPTER 4

KC-130FRT LOADMASTER

400. MARINE AERIAL REFUELING SQUADRON (KC-130FRT) UNIT CORE COMPETENCY

1. Background. Marine Aviation plays a crucial role in the MAGTF's ability to conduct Maneuver Warfare. The ultimate goal of Marine Aviation is to attain the highest possible combat readiness to support Expeditionary Maneuver Warfare while at the same time preserving and conserving our Marines and equipment. Embedded within our combat readiness is the ability to rapidly, effectively, and efficiently deploy on short notice and the ability to quickly and effectively plan for crises and/or contingency operations thereby ensuring Marine Aviation remains ready for combat when and where the need arises. The KC-130FRT T&R Manual represents the collaborative effort of KC-130FRT Subject Matter Experts who designed training standards to maximize the full combat capabilities of the KC-130FRT and its crew. These standards, intrinsic in the core competency section, describe and define unit capabilities and requirements necessary to maintain like-squadron proficiency in core skills and combat leadership. Training events are based on specific requirements and performance standards to ensure aircrew maintain a common base of training and depth of combat capabilities. Together, the T&R comprises a building block approach to ensure that trained aircrews remain ready, relevant, and fully capable of supporting the MAGTF commander.

2. VMGR Mission. Support the MAGTF Commander by providing aerial refueling and assault support, day or night under all weather conditions during expeditionary, joint, or combined operations.

3. Mission Essential Task List (METL)

- a. (UJTL TA 1.1.1) Conduct Tactical Airlift
 - Conduct assault support transport.
- b. (UJTL TA 1.1.4) Conduct Sea and Air Deployment Operations
 - Maintain the capability to deploy and operate from advanced bases, expeditionary airfields and forward operating bases.
 - Perform organizational maintenance on assigned aircraft.
- c. (UJTL TA 1.2.2) Conduct Airborne Operations
 - Provide air delivered assault support transport of combat troops, equipment and supplies.
 - Provide support for casualty evacuation operations.
 - Maintain self-defense capability from ground-to-air and air-to-air threats.
- d. (UJTL TA 4.2) Distribute Supplies and Provide Transport Services
 - Conduct aerial re-supply.
 - Provide support for mobile Forward Arming and Refueling Points (FARPS).
 - Provide support for Rapid Ground Refueling (RGR) of aircraft and vehicles.
- e. (UJTL TA 4.2.3) Conduct Air Refueling
 - Provide Tactical and Long Range Aerial Refueling.

- f. (UJTL TA 5) Exercise Command and Control
 - Provide Airborne Platform for the Airborne DASC Command Post.
- g. (UJTL TA 6.2) Conduct Joint Personnel Recovery
 - Conduct Tactical Recovery of Aircraft and Personnel (TRAP) operations.
 - Augment local Search and Rescue (SAR) assets
- h. (UJTL TA 6.4) Conduct Noncombatant Evacuation
 - Provide support for evacuation operations.

4. Table of Organization. Refer to Table of Organization 8820 and 8821 managed by Total Force Structure, MCCDC, for current authorized organizational structure and personnel strength for KC-130FRT units. As of this publication date, KC-130F/R/T units are authorized:

Squadron
 12 Aircraft
 42 Pilots [26 TPC/16 CP (T2P or T3P)]
 23 TSOs
 25 Flight Engineers
 24 Loadmasters
 24 Flight Mechanics

Detachment
 6 Aircraft
 19 Pilots [11 TPC/8 CP (T2P or T3P)]
 11 TSOs
 12 Flight Engineers
 12 Loadmasters
 12 Flight Mechanics

5. Core Capability. A core capable squadron is able to sustain 9 sorties on a daily basis during contingency/combat operations. The above sortie rates are based on 3.0 hour average sortie duration and assumes \geq 70 percent FMC aircraft and \geq 90 percent T/O aircrew on hand. If unit FMC aircraft < 70 percent or T/O aircrew < 90 percent, core capability will be degraded by a like percentage. A core capable squadron is able to accomplish all tasks designated in the unit METL from a main or expeditionary base.

6. METL/Core Skill Matrix. KC-130FRT core skills directly support the METL as follows:

	KC-130FRT CORE SKILL										CORE PLUS	
METL	AR	TACNAV	FORM	RGR	LRNAV	THRX (I)	THRX (R)	ALZ	NSQ	AD	LRAR	DEFTAC
A. Conduct Tactical Airlift		X	X		X	X	X	X	X			X
B. Conduct Sea and Air Deployment Operations			X		X	X	X	X	X		X	X
C. Conduct Airborne Operations		X	X		X	X	X		X	X		X
D. Distribute Supplies and Provide Transport Services		X		X	X	X	X	X	X	X	X	X
E. Conduct Air Refueling	X	X	X		X	X	X		X		X	X
F. Exercise Command and Control					X	X	X		X			X
G. Conduct Joint Personnel Recovery	X	X	X	X	X	X	X	X	X	X	X	X
H. Conduct Noncombatant Evacuation	X	X	X	X	X	X	X	X	X		X	X

7. KC-130FRT Core Model Minimum Requirements (CMMR). Squadron core competency reflects the minimum level of competency a squadron must achieve to perform its core capability. Squadron core competency is measured in terms of minimum Core Skill Proficiency (CSP) and minimum numbers of flight leaders per paragraphs a and b below:

a. Minimum Unit CSP Requirements. As a minimum, in order to be considered Core Competent, a unit must possess the following numbers of crews who are proficient in each core skill (Unit CSP). In order to be considered proficient in a core skill (individual CSP), a crewmember must attain and maintain proficiency in core skill events, as delineated in paragraphs (1) and (2) below.

* NOTE: DEFTAC and Long Range AAR (LRAR) are core plus skills. Proficiency in DEFTAC and LRAR is not required to obtain unit CSP and will not contribute to unit T-level readiness. Below are KC-130 community recommended unit/individual CSP standards for these skills.

KC-130FRT Unit CSP Requirements							
CORE SKILL *CORE PLUS	Pilot	Copilot	TSO	FE	LM	FM	Crews
AR	14	14	14	14	14	14	14
TACNAV	9	9	9	9	9	9	9
FORM	8	8		8			8
LRNAV	12	12	12	12	12	12	12
THRX(I)	6	6	6	6	6	6	6
THRX(R)	8		4	4			4
ALZ	9	9	9	9	9	9	9
RGR	6	6		6	6	6	6
NSQ	9	9	9	9	9	9	9
AD	4	4	4	4	8	4	4
**CPL					18		18
*LRAR	2		2				1
*DEFTAC	2/2		2	2	2	2	2

KC-130FRT Unit CSP Requirements Detachment							
CORE SKILL	Pilot	Copilot	TSO	FE	LM	FM	Crews
AR	7	7	7	7	7	7	7
TACNAV	5	5	5	5	5	5	5
FORM	4	4		4			4
LRNAV	6	6	6	6	6	6	6
THRX(I)	3	3	3	3	3	3	3
THRX(R)	4		2	2			2
ALZ	5	5	5	5	5	5	5
RGR	3	3	3	3	3	3	3
NSQ	5	5	5	5	5	5	5
AD	2	2	2	2	4	2	2
**CPL					9		9
LRAR	1		1				1
DEFTAC	4		2	2	2	2	2

** CPL is the Cargo and Passenger Loading core skill that applies to loadmasters only and is not included in the METL Core Skill Matrix.

(1) Events Required to Attain Individual CSP. To initially attain CSP, a crewmember must successfully complete all of the T&R events listed in the chart below for that core skill:

KC-130 Loadmaster Attain	RW/FW AR	RGR	ALZ	AD	CPL	LRNAV	TACNAV	THRX(I)	NS	DETFAC
T&R event requirements to attain competency	210 211 213	273 274	271 272 370	241 340	215 216 217 218	250	220 223 322	261	204 213 223 272	462

(2) Events Required to Maintain Individual CSP. To maintain CSP, a crewmember must maintain proficiency in all of the T&R events listed in the chart below for that core skill.

KC-130 Loadmaster Maintain	RW/FW AR	RGR	ALZ	AD	CPL	LRNAV	TACNAV	THRXI	NS	DETFAC
T&R event requirements to maintain competency	213	274	272	241 340	215 216 217 218	250	223	261	213 223 272	462

b. Minimum Combat Leader Requirements. NA.

8. Qualifications And Designations Table. The table below delineates T&R events required to be completed to attain initial qualifications, re-qualifications, and designations. All stage lectures, briefs, squadron training and prerequisites shall be complete prior to completing final events. Qualification and designation letters signed by the commanding officer shall be placed in individual NATOPS and APR/MPR jackets. Loss of proficiency in all qualification events of a core skill causes the associated qualification to be lost. Regaining a qualification requires completing all R coded syllabus events associated with that qualification.

<u>Qualification</u> (TRACKING CODE)	Initial Event Qualification Requirements.
NSQ (604)	204(R), 213, 223, 272
NATOPS (690)	IAW OPNAV 3710.7 and annual qualification letter signed by the commanding officer and 603.

<u>Designation</u> (TRACKING CODE)	Designation Requirements.
RS (601)	273, 274
QASO (602)	444
CPL (603)	215(R), 216(R), 217(R), 218(R)
NSQ (604)	204, 213, 223, 272
T&R I (605)	TRI 590 and designation letter signed by the commanding officer.
NTPSI (606)	NTPSI 591 and designation letter signed by the commanding officer.
NSI (607)	See MAWTS-1 Course Catalog
WTI (608)	See MAWTS-1 Course Catalog

9. Instructor Requirements. A squadron should possess the following numbers of aircrew with the listed instructor designations per the KC-130 T&R and MCO 3500.12C (WTPP).

KC-130 Squadron				
INSTRUCTOR DESIGNATION	Pilots	TSOs	Flight Engineers	Loadmasters
LATI	4			
ANI	6	4	6	4
WTI	2	2	2	2
DEFTACI	1			
NSI	3	3	3	3
T&RI	10	6	10	8

KC-130 Detachment				
INSTRUCTOR DESIGNATION	Pilots	TSOs	Flight Engineers	Loadmasters
LATI	2			
ANI	3	2	3	2
WTI	1	1	1	1
DEFTACI	1			
NSI	1	1	1	1
T&RI	5	3	5	4

10. Definitions

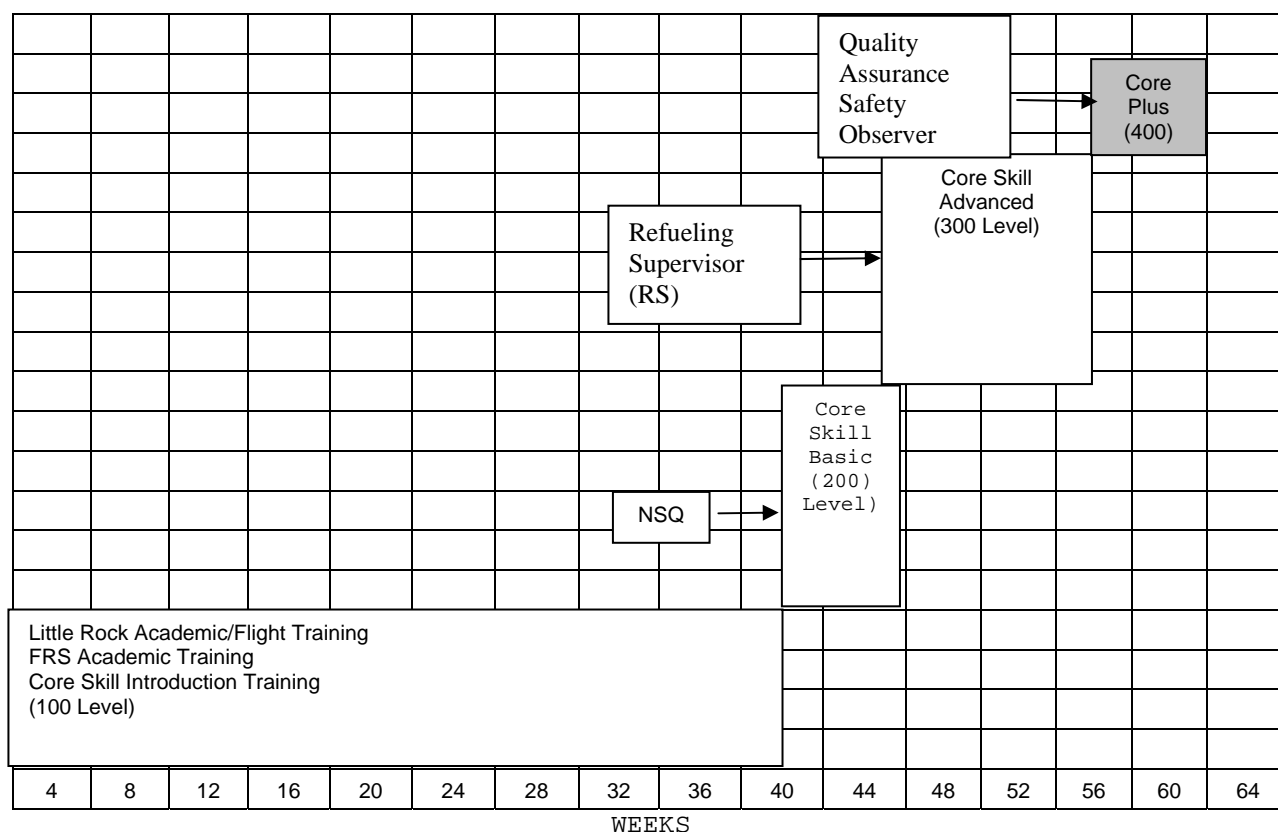
a. Currency. A control measure used to provide an additional margin of safety based on exposure frequency to a particular skill. It is a measure of time since the last event demanding that specific skill. Loss of currency does not affect a loss of Core Skill Proficiency (CSP). For example, currency determines minimum altitudes in rules of conduct based upon the most recent low altitude fly date. Specific currency requirements for individual type mission profiles can be found in the Aviation T&R Program Manual.

b. Proficiency. Proficiency is a measure of achievement of a specific skill. Re-fly factors establish the maximum time between demonstration of those particular skills. CSP is a measurement of "demonstrated proficiency." If an aircrew exceeds the re-fly factor for a particular event, the individual loses CSP for that particular event. To regain proficiency, an individual shall complete the delinquent event with a proficient crewman. If an entire unit loses proficiency, unit instructors shall regain proficiency by completing an event with instructors from a like unit. If not feasible, the instructor shall regain proficiency by completing the event with another instructor. If a unit has only one instructor and cannot complete the event with an instructor from another unit, he shall regain proficiency with another aircraft commander or as designated by his commanding officer.

c. Qualification. A qualification is a status assigned to personnel based on demonstration of proficiency in a specific skill. Specific criteria to achieve qualifications shall be delineated in individual T&R chapters. Upon successful completion of qualification criteria, commanding officers shall issue an appropriate qualification letter for inclusion in the NATOPS jacket and APR/MPR. Aircrew do not lose a qualification as a function of re-fly factor for individual events. Loss of proficiency (delinquent re-fly factor) for all associated qualification core skill events constitutes loss of that qualification. Re-qualification requires demonstration of proficiency. Specific re-qualification criteria shall be delineated in individual T&R chapters.

d. Designation. A designation is a status assigned to an individual based on leadership ability. A designation is a command specific, one-time occurrence and remains in effect until removed for cause. Specific designation requirements shall be delineated in individual T&R chapters. Commanders shall issue a designation letter to the individual upon the occasion of original designation, with appropriate copies for inclusion in the NATOPS jacket and APR.

11. KC-130 FRT Loadmaster Progression Model. The training progression model below provides recommended core skill, qualification, and designation attainment timelines for the average Loadmaster.



401. PROGRAM OF INSTRUCTION (POI) FOR BASIC, TRANSITION, AND CONVERSION LOADMASTER

WEEKS	COURSE	PERFORMING ACTIVITY
1-4	Naval Aircrew Candidate School (NACCS)	NACCS NAS Pensacola
5-9	Basic Aircraft Loadmaster	189 th Airlift Grp/LRAFB
10-16	Loadmaster Initial Qualification	34 th TATG LRAFB
17-23	Loadmaster Mission Qualification	34 th TATG LRAFB
24-38	Core Skill Introduction Training	FRS
39-44	Core Skill Basic Training	Tactical Squadron
45-54	Core Skill Advance Training	Tactical Squadron
55-60	Core Skill Plus Training	Tactical Squadron

402. POI FOR SERIES CONVERSION LOADMASTER

WEEKS	COURSE	PERFORMING ACTIVITY
2	Core Basic Training	Tactical Squadron
1	Core Advanced Training	Tactical Squadron
-	Core Plus Training	Tactical Squadron

403. POI FOR REFRESHER LOADMASTER

WEEKS	COURSE	PERFORMING ACTIVITY
4	Core Basic Training	Tactical Squadron
-	Core Advanced Training	Tactical Squadron
-	Core Plus Training	Tactical Squadron

404. POI FOR INSTRUCTOR LOADMASTER

WEEKS	COURSE	PERFORMING ACTIVITY
1	T&R Instructor	Tactical Squadron
1	NATOPS Instructor	Tactical Squadron
2	Night Systems Instructor	MAWTS-1
5	Weapons and Tactics Instructor	MAWTS-1

410. GROUND TRAINING COURSES OF INSTRUCTION

1. Ground training shall be conducted for each syllabus level.
2. Squadron level ground training required to complete the syllabus are listed in each syllabus level.
3. The following external ground training courses of instruction are required:

<u>COURSE</u>	<u>ACTIVITY</u>
Survival, Evasion, Resistance, and Escape (SERE) Course	NAS Brunswick ME, or NAS North Island CA
NITE Lab	FRS/Tactical Squadron

4. The following external training courses are recommended:

<u>COURSE</u>	<u>ACTIVITY</u>
Advanced Airlift Tactics Training Course	AATTC, St. Joseph, MO
Weapons Tactics Instructor Course (WTI)	MAWTS-1
Night Systems Instructor Course (NSI)	MAWTS-1/Tactical Squadron
Air Transportation of Hazardous Cargo Certification Course	Regional Activity
Weight and Balance Course	Regional Activity
Joint Airdrop Inspector Course	Ft. Lee/Regional Activity

411. AIRCREW TRAINING REFERENCES. The following references shall be utilized to ensure safe and standardized training procedures, grading criteria, and aircraft operation:

NATOPS General Flight and Operating Instructions (OPNAVINST 3710.7_)
 NATOPS Flight Manuals (NFM)
 NATOPS Air-to-Air Refueling Manual (AAR Manual)
 KC-130 Tactical Manual (TACMAN) KC-130 NTTP 3.22-1/3.22-3

KC-130 Cargo Loading Manual (CLM)
MCO P4030.19X Air Transportation of Hazardous Cargo
T&R Program Manual
MAWTS-1 Course Catalog
Allied Tactical Publication - 56 (ATP-56) Air to Air Refueling
Flight Clearance - Issued by NAVAIR

420. BASIC, TRANSITION, AND MODEL CONVERSION LOADMASTER TRAINING SUMMARY:

420.1. Core Skill Introduction Training

CORE SKILL INTRODUCTION TRAINING By Stage	Events	Hours	CRP
Loadmaster Schools (LRAFB)	12	30	30.0
Cargo and Passenger Loading (CPL)	6	18.0	7.0
Aerial Refueling (AR)	3	6.0	5.0
Familiarization (FAM)	3	12.0	4.0
Long Range Navigation (LRNAV)	3	18.0	5.5
Rapid Ground Refueling (RGR)	1	1.0	1.0
NATOPS	1	4.0	7.5
TOTALS	29	89.0	60.0

420.2. Core Skill Basic Training

CORE SKILL BASIC TRAINING By Stage	Events	Hours	CRP
Night Systems (NS)	1	2.0	1.0
Aerial Refueling (AR)	3	6.0	2.5
Cargo and Passenger Loading (CPL)	4	8.0	4.0
Tactical Navigation (TACNAV)	2	4.0	1.5
Aerial Delivery (AD)	1	2.0	1.0
Long Range Navigation (LRNAV)	1	8.0	1.0
Threat Reaction (THRXI)	1	2.0	1.0
Assault Landing Zone (ALZ)	2	3.0	1.5
Rapid Ground Refueling (RGR)	2	4.0	1.5
TOTALS	17	39.0	75.0

420.3. Core Skill Advanced Training

CORE SKILL ADVANCED TRAINING By Stage	Events	Hours	CRP
Tactical Navigation (TACNAV)	1	2.0	7.0
Air Delivery (AD)	1	2.0	6.0
Assault Landing Zone (ALZ)	1	2.0	7.0
TOTALS	3	6.0	95.0

420.4. Core Plus Training

CORE PLUS TRAINING By Stage	Events	Hours	CRP
Aerial Delivery (AD)	4	8.0	4.0
Search and Rescue (SAR)	1	2.0	0.5
Defensive Tactics (DEFTAC)	1	2.0	0.5
TOTALS	6	12.0	100

421. SERIES CONVERSION LOADMASTER421.1. Core Skill Introduction Training

*Note: Not required for Series Conversion.

421.2. Core Skill Basic Training

CORE SKILL BASIC TRAINING By Stage	Events	Hours	CRP
Night Systems (NS)	1	2.0	1.0
Air-to-Air Refueling (AR)	1	2.0	1.5
Long Range Navigation (LRNAV)	1	8.0	1.0
IR Threat Reaction (THRX(I))	1	2.0	1.0
TOTALS	3	12.0	3.0

421.3. Core Skill Advanced Training

CORE SKILL ADVANCED TRAINING By Stage	Events	Hours	CRP
Air Delivery (AD)	1	2.0	6.0
TOTALS	1	2.0	6.0

421.4. Core Plus Training

*Note: Not required for Series Conversion.

422. REFRESHER LOADMASTER422.1. Core Skill Introduction Training

*Note: Not required for Refresher.

422.2. Core Skill Basic Training

CORE SKILL BASIC TRAINING By Stage	Events	Hours	CRP
Night Systems (NS)	1	2.0	1.0
Aerial Refueling (AR)	1	2.0	0.5
Cargo and Passenger Loading (CPL)	4	8.0	4.0
Tactical Navigation (TACNAV)	1	2.0	0.5
Long Range Navigation (LRNAV)	1	8.0	1.0
TOTALS	8	22.0	7.0

422.3. Core Skill Advanced Training

*Note: Not required for Refresher.

422.4. Core Plus Training

*Note: Not required for Refresher.

425. GRADUATE LEVEL COURSES. There are 2 graduate level courses (NSI, and WTI) that qualify instructors to instruct specific events delineated in event or stage descriptions. The requirements for these instructor certifications are contained in the MAWTS-1 Course Catalog.

430. EVENT PERFORMANCE REQUIREMENTS1. General

a. All simulator training codes should be flown prior to the first flight in the aircraft for that phase or stage.

b. All flights annotated with an E shall be evaluated per the Aviation T&R Program Manual.

c. Minimum required refresher flights are indicated with an R. Additional guidance concerning Refresher Loadmasters is contained in the Aviation T&R Program Manual.

d. Flights annotated with an N shall be flown at night without NVDs. Flights annotated with an (N) may be flown at night without NVDs. Flights annotated with an NS shall be flown at night utilizing NVDs. Flights annotated with an (NS) may be flown at night utilizing NVDs.

e. The intent of NS events is to conduct the events with use of NVDs. This should not restrict aircrews from executing events between sunset and end of nautical twilight or beginning of nautical twilight and sunrise when NVDs are less effective. Use of NVDs during these periods shall be at the discretion of the aircraft commander with safety and the NS intent in mind.

f. For NS operations, the fixed wing minimum altitudes delineated in the Aviation T&R Program Manual shall be adhered to in all phases of flight except for TLZ operations and airdrops from IP inbound, at which point a descent to airdrop altitude or final approach procedure may be conducted. Minimum altitudes for Aerial Delivery shall be per NWP 3-22.5-KC-130, Vol. 1, Chapter 6 and Appendix H.

2. Crew Resource Management (CRM). CRM shall be briefed for all flights and events.

431. CORE SKILL INTRODUCTION TRAINING1. General

a. Upon completion of this phase of training, the loadmaster will be a NATOPS qualified In-flight air-to-air Refueling Observer (IRO) and Airborne Radio Operator (ARO). The loadmaster will be capable of basic day IRO and ARO duties to include normal and emergency procedures and CRM.

b. All events in the Core Skill Introduction phase shall be instructed/evaluated by a designated FRS instructor via appropriate aircrew training forms.

c. Once a loadmaster has completed the Core Skill Introduction series, no requirement exists to re-fly Core Skill Introduction flights.

d. Students should attend NITE Laboratory within this phase of training.

2. Cargo And Passenger Loading (CPL)

a. Purpose. Introduce the student to all duties on cargo and passenger flights. Upon completion of this stage of instruction, the student will demonstrate the ability to:

(1) Preflight and configure an aircraft per mission requirements.

- (2) Determine available seating and/or cargo space.
- (3) Plan cargo and/or passenger loading to conform with all aircraft and safety limitations IAW NAVAIR 01-75GAA-9 and 01-75GXX-1.
- (4) Utilize all loading aids conforming to the limitations, installations, and usage of each per NAVAIR 01-75GAA-9.
- (5) Safely load/off-load cargo per NAVAIR 01-75GAA-9 and 01-75GXX-1.
- (6) A DD Form 365-4 will be computed with emphasis on accuracy in the take-off and landing conditions, limitations, zero fuel weight, and center of gravity sections.
- (7) Safely inspect, handle, and transport cargo certified as hazardous material per MCO P4030.19.
- (8) Postflight and document repairs required to return cargo compartment to operational readiness.
- b. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.
- c. Ground/Academic Training. FRS academic courseware.
- d. Simulator Event Training (6 Events, 12.0 Hours)

CPL-100 3.0 1 KC-130F/R/T S/A

Goal. Introduce the student to loading passengers and baggage on a tanker configured aircraft.

Requirement. The student will configure a tanker aircraft for a flight transporting the maximum permitted number of passengers and baggage. The student will demonstrate the installation of centerline and sidewall seats and seat spacing configurations. Special emphasis will be placed on maximum loads for overland and overwater flights, maximum ramp loads, baggage staging and handling, loading and tie down procedures, and accurate passenger manifesting. Inflight cargo jettison procedures will be thoroughly explained by the student.

Performance Standard. Per NFM, Core Skill Introduction Load Simulator Training guide, and NAVAIR 01-75GAA-9.

Prerequisites. N/A

Ordinance. N/A

External Syllabus Support. Material Handling Equipment (MHE) from MWSS.

CPL-101 3.0 1 KC-130F/R/T S/A

Goal. Introduce the student to loading passengers and baggage on a tanker configured aircraft.

Requirement. The student will configure an aircraft for a flight transporting passengers and cargo on a tanker configured aircraft with fuselage tank fuel. Emphasize

preflight inspection and utilization of loading equipment. Inflight cargo jettison procedures and the use of the zero fuel weight limitations chart will be thoroughly explained by the student.

Performance Standard. Per NFM, Core Skill Introduction Load Simulator Training guide, and NAVAIR 01-75GAA-9.

Prerequisites. N/A

Ordinance. N/A

External Syllabus Support. Material Handling Equipment (MHE) from MWSS.

CPL-102

3.0 1 KC-130F/R/T S/A

Goal. Introduce the student to loading palletized cargo and rolling stock on a dual rail equipped aircraft.

Requirement. The student will configure an aircraft equipped with dual rails for a flight transporting palletized cargo and rolling stock. Special emphasis will be placed on preflight inspection and operation of the dual rail system, installation and removal of the roller conveyer sections, winch operation, and utilization of a forklift as the primary loading vehicle. Inflight cargo jettison procedures will be thoroughly explained by the student.

Performance Standard. Per NFM, Core Skill Introduction Load Simulator Training guide, and NAVAIR 01-75GAA-9.

Prerequisites. N/A

Ordinance. N/A

External Syllabus Support. MHE from MWSS.

CPL-103

3.0 1 KC-130F/R/T S/A

Goal. Introduce the student to loading hazardous cargo on a dual rail equipped aircraft.

Requirement. The student will conduct an aircraft preflight and configure an aircraft equipped with dual rails for a flight transporting hazardous and general palletized cargo and rolling stock. The student will inspect the load for acceptability for air transportation, including: condition of load, certification of hazardous cargo, compatibility of hazardous cargo and compliance with MCO P4030.19. After inspection, the student will prepare and present a load plan demonstrating consideration for separation of noncompatible hazardous cargo, accessibility of tie down points, and ease of loading and off-loading. This load will include mixed cargo to ensure maximum utilization of all loading aids and include cargo that will encourage the student to consider varying dimensions/limitations. Inflight cargo jettison procedures will be thoroughly explained by the student.

Performance Standard. Per NFM, Core Skill Introduction Load Simulator Training guide, and NAVAIR 01-75GAA-9.

Prerequisites. N/A

Ordinance. N/A

External Syllabus Support. MHE from MWSS.

CPL-104

3.0 1 KC-130F/R/T S/A

Goal. Introduce the student to loading litters and knowledge of Non-Combatant Evacuation (NEO).

Requirement. The student will conduct an aircraft preflight, configure aircraft, and load litters. Special emphasis will be placed on preflight inspection, installation of litter equipment, safe movement of casualties, and installation of ground loading ramps. Knowledge of NEO shall be demonstrated.

Performance Standard. Per NFM, Core Skill Introduction Load Simulator Training guide, and NAVAIR 01-75GAA-9.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. N/A.

CPL-105

3.0 E 1 KC-130F/R/T S/A

Goal. Completion of Core Skill Introduction CPL stage check.

Requirement. The student, under the direct supervision of a FRS designated instructor, will plan, stage and load a cargo frame configured aircraft within a 90 minute time limit. The utilization of a load planning sheet is not authorized. The load will consist of passengers and cargo requiring 80 percent of the cargo area to be used. Special emphasis will be placed on preflight inspection and removal of the roller conveyer sections, winch operation, and utilization of loading equipment. Inflight cargo jettison procedures will be thoroughly explained by the student.

Performance Standard. Per NFM, Core Skill Introduction Load Simulator Training guide, and NAVAIR 01-75GAA-9.

Prerequisite. CPL-100, 101, 102, 103, 104.

Ordinance. N/A

External Syllabus Support. MHE from MWSS.

3. Air-To-Air Refueling (AR)

a. Purpose. Train the student to perform the duties of an IRO. At the end of this phase of training the student will be able to:

- (1) Preflight the aircraft per specific mission requirements.

(2) A DD Form 365-4 will be computed with emphasis on accuracy in the take-off and landing conditions, limitations, zero fuel weight, and center of gravity sections.

(3) Perform duties as an IRO during hose checks, correctly identifying the status of the system's operation, and coordinating this status with the Flight Engineer.

(4) Perform duties as an IRO during air-to-air refueling operations, correctly informing the Plane Commander and Flight Engineer of the status of the refueling system and receiver aircraft.

(5) Complete aerial refueling records for turn-in to the operations department.

(6) Correctly perform all related emergency procedures as necessary.

b. General. N/A

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. FRS academic courseware.

e. Flight Event Training (3 Flights, 6.0 Hours)

AR-110 2.0 1 KC-130F/R/T A

Goal. Introduce the student to duties of an IRO during a day fixed wing air-to-air refueling mission.

Requirement. The student will conduct an aircraft preflight for a fixed wing air-to-air refueling mission, and perform the duties of an IRO during a day fixed wing aerial refueling mission. The student will keep separate aerial refueling records for comparison at the end of the flight. This flight should involve refueling multiple aircraft. The student should observe from both sides of the aircraft and monitor the ICS and all radio transmissions during the entire evolution. The student will demonstrate a thorough understanding of all tactical fixed wing air-to-air refueling terminology.

Performance Standard. Per NFM, Core Skill Introduction Flight Training guide, and NAVAIR 00-80T-110.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. Fixed wing receivers.

AR-111 2.0 1 KC-130F/R/T A

Goal. Introduce the student to the duties of an IRO during a day rotary wing air-to-air refueling mission.

Requirement. The student will conduct an aircraft preflight for a rotary wing air-to-air refueling mission, and perform duties during a day rotary wing aerial refueling mission. The student will keep separate aerial refueling records for comparison at the end of the flight. This flight should

involve refueling multiple aircraft. The student should observe and monitor the ICS and all radio transmissions during the entire evolution. The student will demonstrate a thorough understanding of all rotary wing aerial refueling terminology.

Performance Standard. Per NFM, Core Skill Introduction Flight Training guide, and NAVAIR 00-80T-110.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. Rotary wing receivers.

AR-112

2.0

E 1 KC-130F/R/T A

Goal. Completion of Core Skill Introduction AR stage check.

Requirement. The student will perform the duties of an IRO during a day aerial refueling mission. Emphasize correct terminology, safety, emergency procedures, ICS, discipline, and crew coordination during all phases of the flight.

Performance Standard. Per NFM, Core Skill Introduction Flight Training guide, and NAVAIR 00-80T-110.

Prerequisite. AR-110, 111.

Ordinance. N/A

External Syllabus Support. Receiver aircraft.

4. Familiarization (FAM)

a. Purpose. Train the student to perform the basic NATOPS flight crew requirements, aircraft preflight preparation, cargo loading equipment use and storage, aircraft limitations and dimensions, location and use of emergency equipment, ground and inflight emergency procedures, and aircraft postflight procedures. Instruction shall be provided to the student demonstrating the location/conduct of the aircrew mission brief, the proper filing of the weight and balance form, [DD Form 365-4](#), and galley preparations for a flight. At the end of this stage of training the student will be able to:

(1) Participate in an aircrew mission brief, determine the special needs for the flight, and plan an aircraft configuration accordingly.

(2) Coordinate with other crewmembers to ensure safe and timely conduct of the flight.

(3) Preflight the aircraft per specific mission requirements.

(4) A [DD Form 365-4](#) will be computed emphasizing accuracy in the take-off and landing conditions, limitations, zero fuel weight, and center of gravity sections.

(5) Properly configure the aircraft per aircrew mission brief and mission requirements.

(6) Demonstrate a thorough knowledge of the ICS system, ICS operation, and circuit discipline.

(7) Demonstrate the proper responses and perform all duties required during inflight and ground emergencies per section V of NATOPS.

(8) Conduct a proper aircraft postflight.

(9) Properly complete and file all related paperwork.

b. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

c. Ground/Academic Training. FRS academic courseware.

d. Flight Event Training (3 Flights, 12.0 Hours)

FAM-115

4.0

SC 1 KC-130F/R/T A

Goal. Introduce the student to standard NATOPS procedures, duties and responsibilities during normal operations, to include inflight and ground emergencies.

Requirement. The student will demonstrate a thorough knowledge of all cargo compartment limitations to include; treadway limitations, deck limitations, tie down restraint criteria and formulas, pallet position limits, ramp limitations, maximum seating configurations, PSI limits, shoring requirements, cargo compartment height and width limitations, and the use of all applicable loading charts. The student will demonstrate the NATOPS procedures for ground evacuation, bailout, and inflight door open warning. Additionally the student will observe and perform the following:

- (1) Attend the pilot/aircrew brief.
- (2) Check the Aircraft Discrepancy Book (ADB) for pertinent entries.
- (3) Conduct an aircraft preflight.
- (4) Demonstrate the use of all emergency equipment.
- (5) Handle simulated emergency procedures per NATOPS.
- (6) Locate and operate the applicable ICS system.
- (7) Demonstrate takeoff/landing procedures and responsibilities.
- (8) Conduct an aircraft postflight.
- (9) Demonstrate emergency and manual extension of the main and nose landing gear.
- (10) Demonstrate main landing gear tie down procedures for tanker and cargo configured aircraft.

Performance Standard. Per NFM, and Core Skill Introduction Flight Training guide.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. N/A

FAM-116

4.0

SC 1 KC-130F/R/T A

Goal. Continue instructions on standard NATOPS procedures, duties, and responsibilities during normal operations to include inflight and ground emergencies.

Requirement. The student will brief and prepare for a standard flight. A thorough knowledge of the use of all cargo loading aids will be demonstrated by the student. Additionally, the student will demonstrate the NATOPS procedures for fuselage fire, smoke and fume elimination, rapid decompression, and flap system failure. The student will prepare the aircraft for (simulated) cargo jettison.

Performance Standard. Per NFM, and Core Skill Introduction Flight Training guide.

Prerequisite. FAM-115.

Ordinance. N/A

External Syllabus Support. N/A

FAM-117

4.0

E SC 1 KC-130F/R/T A

Goal. Completion of Core Skill Introduction FAM stage check.

Requirement. The student will perform the steps for the following emergencies:

- (1) Ground evacuation.
- (2) Bailout.
- (3) Inflight door open warning.
- (4) Fuselage fire.
- (5) Smoke and fume elimination.
- (6) Rapid decompression.

Performance Standard. Per NFM, and Core Skill Introduction Flight Training guide.

Prerequisite. FAM-115, 116.

Ordinance. N/A

External Syllabus Support. N/A

5. Overwater HF Communication (OW)

a. Purpose. Train the student in HF communication equipment operation, procedures, relaying agencies, frequency selection, and responsibilities during overwater flights. Specifically, at the completion of this phase of instruction the student will be able to:

- (1) Conduct an operational check of aircraft HF communication equipment.
 - (2) Compute a [DD Form 365-4](#) emphasizing accuracy in take-off and landing conditions, limitations, zero fuel weight, and center of gravity sections.
 - (3) Troubleshoot and perform minor maintenance on HF equipment.
 - (4) Prepare an aircraft for an overwater flight with respect to emergency equipment requirements.
 - (5) Correctly operate all HF communication equipment.
 - (6) Select a frequency based on time of day and distance to the controlling agency.
 - (7) Conduct overwater HF communications including initial contact reports, compulsory enroute position reports, position report revisions, phone patches through USAF GCCS stations, be able to relay traffic to or from other aircraft, obtain and/or request inflight clearances, and prepare an enroute distress message for transmission.
 - (8) Identify and monitor published guard channels on applicable radios.
 - (9) Correctly react to a ditching scenario.
- b. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.
 - c. Ground/Academic Training. FRS academic courseware.
 - d. Flight Event Training (3 Flights 18.0 Hours)

OW-150

6.0

SC 1 KC-130F/R/T A

Goal. Introduce the student to overwater HF communication procedures and equipment.

Requirement. The student will conduct an appropriate aircraft preflight, conduct an operational check of all HF communication equipment, perform the HF transmission of an initial contact report, enroute position reports, position report revisions, clearance copying, preparation of a distress message, and the preparation of all flight related documentation. The student will properly respond to a simulated ditching and a simulated overwater bailout drill. Additionally, the student will receive instruction on lost HF communication procedures and ditching duties on flights involving passengers.

Performance Standard. Per NFM and Core Skill Introduction Training guide.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. N/A

OW-1516.0SC 1 KC-130F/R/T A

Goal. Continue instruction on overwater HF communication procedures and equipment.

Requirement. The student will conduct an appropriate aircraft preflight, conduct an operational check of all HF communication equipment, perform the HF transmission of an initial contact report, enroute position reports, position report revisions, clearance copying, preparation of a distress message, and the preparation of all flight related documentation. The student will perform these duties without any pre-guidance from the instructor. The student will employ the concepts of crew coordination in the accomplishment of his assigned tasks. The student will properly respond to simulated lost HF communication procedures and ditching duties on flights involving passengers and cargo (cargo jettison).

Performance Standard. Per NFM and Core Skill Introduction Training guide.

Prerequisite. OW-150.

Ordinance. N/A

External Syllabus Support. N/A

OW-1526.0E 1 KC-130F/R/T A

Goal. Completion of Core Skill Introduction OW stage check.

Requirement. The student will conduct an appropriate aircraft preflight, conduct an operational check of all HF communication equipment, perform the HF transmission of an initial contact report, enroute position reports, position report revisions, clearance copying, preparation of a distress message, and the preparation of all flight related documentation. The student will employ the concepts of crew coordination in the accomplishment of his assigned tasks. The student will properly respond to simulated lost HF communication procedures and ditching duties on flights involving passengers and cargo (cargo jettison).

Performance Standard. Per NFM and Core Skill Introduction Training guide.

Prerequisite. OW-151.

Ordinance. N/A

External Syllabus Support. N/A

6. Rapid Ground Refueling (RGR)

a. Purpose. Introduce the planning, identify the required equipment, set up, and break down the RGR system for rotary/fixed wing aircraft and vehicles.

b. General. FRS designated instructors shall instruct this stage of training.

c. Crew Requirements. FRS Loadmaster Instructor for ground training evolution.

d. Ground/Academic Training. FRS academic courseware.

e. Simulator Event Training (1 Event, 1.0 Hour)

RGR-170 0.0 1 KC-130F/R/T S/A

Goal. Introduce the student to the procedures for a 2 point RGR set up.

Requirement. The student will observe a preflight, set up, and simulation of a 2 point RGR operation. Instruction will include the inspection of all RGR equipment, breakdown of refueling points, and related postflight duties.

Performance Standard. Per NFM, NWP 3-22.5-KC130 Volume 1, and Core Skill Introduction Training guide.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. RGR equipment from VMGR squadron.

7. NATOPS

a. Purpose. Determine that the student has achieved the minimum NATOPS requirements.

b. General

(1) The flight portion of this evaluation shall be accomplished on a multi-leg flight.

(2) VMGRT-253-designated KC-130F/R/T Loadmaster NATOPS instructor shall evaluate this flight.

(3) Open and closed book examination shall be completed prior to NATOPS flight evaluation.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. N/A

e. Flight Event Training (1 Flight, 4.0 Hours)

CK-190 4.0 E 1 KC-130F/R/T A

Goal. Completion of NATOPS flight evaluation.

Requirement. The student will demonstrate the ability to meet NATOPS requirements. This sortie will be conducted on a multi-leg flight.

Performance Standard. Per NFM.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. N/A

432. CORE SKILL BASIC TRAINING

1. General. Upon completion of this phase of training, the loadmaster shall be qualified in Night Systems, Cargo/Pax loading (to include hazardous cargo), Air-to-Air Refueling, Low Level flight, Threat Reaction, and Rapid Ground Refueling.

2. Night Systems (NS)

a. Purpose. Introduce Night Vision Devices (NVDs).

b. General. A loadmaster NSI shall instruct this stage of training. An NVD equipped aircraft should be used for this event.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training

(1) Completion of NITE Lab.

(2) Completion of academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.

e. Flight Event Training (1 Event, 2.0 Hours)

<u>NS-204</u>	<u>2.0</u>	<u>SC,R 1 KC-130F/R/T A NS</u>
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Goal. Introduce NVDs.

Requirement. Emphasize NVD focusing and alignment, components, preflight, lighting, normal and emergency flight duties utilizing NVDs.

Performance Standards. Per NFM, TACMAN/NTTP, MAWTS-1 Fixed Wing NVD Manual, and Core Skill Basic Training guide.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. N/A

3. Air-To-Air Refueling (AR)

a. Purpose. Continue instruction or maintain proficiency in day, night, NS fixed wing and rotary wing air-to-air refueling.

b. General. An AR qualified Loadmaster T&R Instructor may instruct the day and night sorties. An NSI is required to instruct the initial NSQ sortie.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. Utilize academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.

e. Flight Event Training (3 Event, 6.0 Hours).

<u>AR-210</u>	<u>2.0</u>	<u>R 1 KC-130F/R/T A</u>
<p><u>Goal</u>. Continue instruction, or maintain proficiency in day fixed wing or rotary wing air-to-air refueling.</p> <p><u>Requirement</u>. Perform duties as IRO during a day high-speed or low-speed air-to-air refueling. Emphasize terminology, safety, emergency procedures, Emission Control (EMCON) signals, and ICS discipline.</p> <p><u>Performance Standards</u>. Per NFM, NAVAIR 00-80T-110, TACMAN/NTTP, and Core Skill Basic Training guide.</p> <p><u>Prerequisite</u>. N/A</p> <p><u>Ordinance</u>. N/A</p> <p><u>External Syllabus Support</u>. Receiver aircraft.</p>		
<u>AR-211</u>	<u>2.0</u>	<u>SC 1 KC-130F/R/T A N</u>
<p><u>Goal</u>. Introduce or maintain proficiency in night fixed wing or rotary wing air-to-air refueling.</p> <p><u>Requirement</u>. Perform duties as IRO during night fixed wing or rotary wing air-to-air refueling. Emphasize terminology, safety, emergency procedures, EMCON signals, and ICS discipline.</p> <p><u>Performance Standards</u>. IAW NFM, NAVAIR 00-80T-110, TACMAN/NTTP, and Core Skill Basic Training guide.</p> <p><u>Prerequisite</u>. AR-210.</p> <p><u>Ordinance</u>. N/A</p> <p><u>External Syllabus Support</u>. Receiver aircraft.</p>		
<u>AR-213</u>	<u>2.0</u>	<u>1 KC-130F/R/T A NS</u>
<p><u>Goal</u>. Introduce or maintain proficiency in NS fixed wing or rotary wing air-to-air refueling.</p> <p><u>Requirement</u>. Perform duties as IRO during a night fixed wing or rotary wing air-to-air refueling utilizing NVDs with emphasis on focusing and alignment, components, preflight, lighting, scanning, crew coordination, normal and emergency flight duties. Additional emphasis on terminology, safety, emergency procedures, EMCON signals, and ICS discipline.</p> <p><u>Performance Standards</u>. Per NFM, NAVAIR 00-80T-110, TACMAN/NTTP, MAWTS-1 Fixed Wing NVD Manual, and Core Skill Basic Training guide.</p>		

Prerequisite. NS-204, AR-210.

Ordinance. N/A

External Syllabus Support. Receiver aircraft.

4. Cargo And Passenger Loading (CPL)

a. Purpose. Qualify and maintain proficiency for cargo and passenger logistics flights.

b. General. The following are basic requirements for all events of this stage of training. Additionally, Engine Running Loading/Off-Loading (ERO) will be discussed/demonstrated, and cargo jettison procedures will be discussed:

- (1) Preflight per NFM and mission requirements.
- (2) Determine available seating, cargo space, escape hatch/liferaft/life preserver requirements.
- (3) Brief passengers as required per NFM.
- (4) Ensure hazardous materials comply with MCO P4030.19_.
- (5) Load passengers and/or cargo per NAVAIR 01-75GAA-9, NFM, TACMAN/NTTP.
- (6) Complete and file [DD Form 365-4](#).
- (7) Provide passenger comfort/safety provisions.
- (8) Off-load passengers and/or cargo per NAVAIR 01-75GAA-9.
- (9) File required flight documentation to include [DD-Form 365-4s](#), and Passenger and Cargo manifests. All other documentation per squadron directives.
- (10) Postflight and document repairs required to return aircraft to operational readiness.
- (11) A CPL qualified T&R Instructor may instruct this stage of training.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. N/A

e. Flight Event Training (4 Events, 8.0 Hours)

<u>CPL-215</u>	<u>2.0</u>	<u>R 1 KC-130F/R/T A (N)</u>
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Goal. Continue instruction, and maintain proficiency in passenger and baggage Loading.

Requirement. The loadmaster will configure and load passengers and baggage. Emphasize seating configurations, passenger briefing, and safety.

Performance Standards. Per NFM, NAVAIR 01-75GAA-9, and Core Skill Basic Training guide.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. Air terminal representative and MHE specific to mission requirements.

CPL-216 2.0 R 1 KC-130F/R/T A/S (N)

Goal. Continue instruction, and maintain proficiency in 463L pallet loading.

Requirement. The loadmaster will configure and load 463L pallets. Emphasize forklift/K-loader operations, dual rail preflight and operation.

Performance Standards. Per NFM, NAVAIR 01-75GAA-9, and Core Skill Basic Training guide.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. Air terminal representative and MHE specific to mission requirements

CPL-217 2.0 R 1 KC-130F/R/T A/S (N)

Goal. Continue instruction, and maintain proficiency in rolling/wheeled/self-propelled cargo loading.

Requirement. The loadmaster will configure and load rolling/wheeled/self-propelled cargo. Emphasize tie-down configurations, winching procedures, and restraint criteria, floor limitations, and shoring requirements.

Performance Standards. Per NFM, NAVAIR 01-75GAA-9, and Core Skill Basic Training guide.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. Air terminal representative and MHE specific to mission requirements.

CPL-218 2.0 R 1 KC-130F/R/T A/S (N)

Goal. Continue instruction, and maintain proficiency in bulk cargo loading.

Requirement. The loadmaster will configure and load bulk cargo. Emphasize cargo loading aids, cargo compartment/deck limitations, shoring and tie-down procedures.

Performance Standards. Per NFM, NAVAIR 01-75GAA-9, and Core Skill Basic Training guide.

Prerequisite. N/A

Ordnance. N/A

External Syllabus Support. Air terminal representative and MHE specific to mission requirements.

5. Tactical Navigation (TACNAV)

a. Purpose. Introduce and maintain proficiency in day and NS low level navigation.

b. General. A Low Level qualified T&R Instructor may instruct the day sortie; an NSI is required to instruct the NSQ sortie.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. Utilize academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.

e. Flight Event Training (2 Events, 4.0 Hours)

TACNAV-220 2.0 R 1 KC-130F/R/T A

Goal. Introduce and maintain proficiency in day low level navigation.

Requirement. Perform duties as aft lookout during a day low level mission. Emphasize cargo compartment preparation, crew briefing, route study, lookout doctrine, scanning for threats/terrain clearance, threat templates, and combat entry/exit checklists.

Performance Standards. Per NFM, NAVAIR 00-80T-110, TACMAN/NTTP, and Core Skill Basic Training guide.

Prerequisite. N/A

Ordnance. N/A

External Syllabus Support. N/A

TACNAV-223 2.0 1 KC-130F/R/T A NS

Goal. Introduce and maintain proficiency in NS low level navigation.

Requirement. Perform duties as aft lookout during a night systems low level mission utilizing NVDs with emphasis on

focusing and alignment, components, preflight, lighting, scanning, terrain recognition, normal and emergency flight duties. Additional emphasis on cargo compartment preparation, crew briefing, route study, lookout doctrine, scanning for threats/terrain clearance, threat templates, and combat entry/exit checklists.

Performance Standards. Per NFM, NAVAIR 00-80T-110, TACMAN/NTTP, MAWTS-1 Fixed Wing NVD Manual, and Core Skill Basic Training guide.

Prerequisite. NS-204, TACNAV-220.

Ordinance. N/A

External Syllabus Support. N/A

6. Aerial Delivery (AD)

a. Purpose. Introduce and maintain proficiency in personnel static line airdrop.

b. General. A personnel static line AD qualified T&R Instructor may instruct this sortie. If flown using NS, loadmaster shall be NSQ or accompanied by an NSI.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. Use academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.

e. Flight Event Training (1 Event, 4.0 Hours)

<u>AD-241</u>	<u>4.0</u>	<u>1 KC-130F/R/T A (N)</u>
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Goal. Introduce and maintain proficiency in personnel static line airdrop.

Requirement. Perform duties as secondary, followed by primary, during a static line airdrop from the ramp or paratroop door. Training shall progress from secondary to primary duties. Emphasize preflight, configuration, limitations, rigging, briefing, loading, execution, checklists, and emergency procedures. Door bundles should be discussed. A [DD Form 365-4](#) shall be completed emphasizing center of gravity and less airdrop load block.

Performance Standards. Per NFM, TACMAN/NTTP, NAVAIR 01-75GAA-9, and Core Skill Basic Training guide. If flown utilizing NVDs the MAWTS-1 Fixed Wing Night Vision Device Manual applies.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. USMC-authorized parachutists or other service equivalent.

7. Long Range Navigation (LRNAV)

a. Purpose. Continue instruction and maintain proficiency for long range navigation high-frequency (HF) communications.

b. General. A qualified T&R Instructor may instruct this sortie.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. N/A

e. Flight Event Training (1 Event, 8.0 Hours)

LRNAV-250 8.0 SC,R 1 KC-130F/R/T A (N)

Goal. Continue instruction and maintain proficiency for LRNAV HF communications.

Requirement. Perform duties as Airborne Radio Operator (ARO) using HF communication equipment. Emphasize components, operation, voice procedures, phone patch, frequency selection, trouble shooting, emergency procedures, and customs/agriculture. Escape hatch requirements, survival equipment and life-raft procedures shall be discussed.

Performance Standards. Per NFM, FIH, and enroute supplement.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. N/A

8. Threat Reaction (THRXI)

a. Purpose. Introduce and maintain proficiency for THRXI.

b. General. A qualified T&R Instructor may instruct this sortie. A WTI/LATI pilot or WTI loadmaster should instruct this sortie. If flown using night systems, loadmaster must be NSQ or accompanied by an NSI.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. Use academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.

e. Flight Event Training (2 Events, 4.0 Hours)

THRXI-261 2.0 SC 1 KC-130F/R/T A (N)

Goal. Introduce and maintain proficiency for THRXI.

Requirement. Perform duties as aft lookout during a day or night systems TACNAV event. Emphasize cargo compartment preparation, crew briefing, lookout doctrine, scanning for threats/terrain clearance, threat templates, Aircraft Survivability Equipment, and combat entry/exit checklists.

Performance Standards. Per NFM, TACMAN/NTTP, NAVAIR 01-75GAA-9, and Core Skill Basic Training guide.

Prerequisite. TACNAV-220.

Ordnance. Smokey Sams, 140 decoy flares.

External Syllabus Support. Smokey Sam Team.

9. Assault Landing Zone (ALZ)

a. Purpose. Introduce and maintain proficiency on a day and night systems ERO with tactical considerations.

b. General. A qualified T&R Instructor may instruct this sortie. An NSI shall instruct the NSQ sortie.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. Utilize academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.

e. Flight/Simulator Event Training (2 Events, 3.0 Hours)

ALZ-271 1.5 1 KC-130F/R/T A

Goal. Introduce and maintain proficiency on a day ERO.

Requirement. Perform loadmaster duties during a day ERO. Emphasize cargo compartment preparation, protective equipment, expedient and safe loading/off-loading. Initial event completion shall include reverse taxi maneuvering. Tactical considerations shall be discussed and/or performed.

Performance Standards. Per NFM, TACMAN/NTTP, NAVAIR 01-75GAA-9, and Core Skill Basic Training guide.

Prerequisite. N/A

Ordnance. N/A

External Syllabus Support. MHE.

ALZ-272 1.5 1 KC-130F/R/T A NS

Goal. Introduce and maintain proficiency on a NS ERO.

Requirement. Perform loadmaster duties during a NS ERO utilizing NVDs emphasizing focusing and alignment, components, preflight, lighting, care in austere environments, aided loading/off-

loading, normal and emergency flight duties. Additional emphasis shall be on cargo compartment preparation/blackout, protective equipment, expedient and safe loading/off-loading. Initial event completion shall include aided reverse taxi maneuvering. Tactical considerations shall be discussed and/or performed.

Performance Standards. Per NFM, TACMAN/NTTP, NAVAIR 01-75GAA-9, MAWTS-1 Fixed Wing NVD Manual, and Core Skill Basic Training guide.

Prerequisite. NS-204, ALZ-271

Ordinance. N/A

External Syllabus Support. MHE.

10. Rapid Ground Refueling (RGR)

a. Purpose. Continue instruction and maintain proficiency on day and NS RGR.

b. General. A NSQ and proficient T&R Instructor may instruct this stage of training. If flown utilizing NS, loadmaster shall be NSQ or accompanied by an NSI.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. Utilize academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.

e. Flight Event Training (2 Events, 4.0 Hours)

RGR-273 2.0 1 KC-130F/R/T A

Goal. Continue instruction and maintain proficiency on day RGR.

Requirement. Perform duties during a day RGR, minimum 2 point setup, including actual transfer of fuel to either rotary wing or fixed wing aircraft or tactical vehicles. The initial event shall be conducted with rotary or fixed wing aircraft only. Initial instruction shall be on planning, inspection and configuration of equipment, site setup, Deployed Refueling Personnel (DRP) duties, safety, emergency procedures, and site teardown. Follow-on instruction should lead to Refueling Supervisor (RS) qualification.

Performance Standards. Per NFM, TACMAN/NTTP, NAVAIR 01-75GAA-9, MAWTS-1 Fixed Wing NVD Manual, and Core Skill Basic Training guide.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. Rotary wing or fixed wing aircraft or tactical vehicles.

RGR-274 2.0 1 KC-130F/R/T A NS

Goal. Continue instruction and maintain proficiency on NS RGR.

Requirement. Perform duties during a NS RGR, minimum 2 point setup, including actual transfer of fuel to either rotary wing or fixed wing aircraft, or tactical vehicles. The initial event shall be conducted with rotary or fixed wing aircraft only. Initial instruction shall be on planning, inspection and configuration of equipment, site setup, DRP duties, safety, emergency procedures, and site teardown. Follow-on instruction should lead to RS qualification.

Performance Standards. Per NFM, TACMAN/NTTP, NAVAIR 01-75GAA-9, MAWTS-1 Fixed Wing NVD Manual, and Core Skill Basic Training guide.

Prerequisite. NS-204, RGR-273.

Ordinance. N/A

External Syllabus Support. Rotary wing or fixed wing aircraft.

433. CORE SKILL ADVANCED TRAINING

1. General. Upon completion of this stage of training, the loadmaster will be qualified in Low Altitude Tactics (LAT), Container Delivery System (CDS), AD, and NS Combat Offload (COL). Instructors must be proficient in the skill they are teaching. If utilizing NS, they must also be NSQ and proficient in NS.

2. Tactical Navigation (TACNAV)

- a. Purpose. Introduce and maintain proficiency in day LAT.
- b. General. A LAT qualified T&R Instructor may instruct this sortie.
- c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.
- d. Ground/Academic Training. Utilize academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.
- e. Flight Event Training (1 Event, 2.0 Hours)

TACNAV-322 2.0 1 KC-130F/R/T A

Goal. Introduce and maintain proficiency in day LAT.

Requirement. Perform duties as aft lookout and/or rear vision device lookout during LAT. Emphasize cargo compartment preparation, crew briefing, route study, lookout doctrine, scanning for threats/terrain clearance, threat templates, and combat entry/exit checklists.

Performance Standards. Per NFM, TACMAN/NATTP, and Core Skill Advanced Training guide.

Prerequisite. TACNAV-220.

Ordinance. N/A

External Syllabus Support. Approved LAT route.

3. Aerial Delivery (AD)

a. Purpose. Continue instruction and maintain proficiency in CDS.

b. General. A CDS qualified T&R Instructor may instruct this sortie. If flown utilizing NS, loadmaster shall be NSQ or accompanied by an NSI.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. Utilize academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.

e. Flight Event Training (4 Events, 8.0 Hours)

AD-340 2.0 SC 1 KC-130F/R/T A (N)

Goal. Continue instruction and maintain proficiency in CDS.

Requirement. Perform duties as the primary loadmaster (for initial event completion) during a day, night, or NS CDS airdrop from the ramp. Follow-on proficiency may be either primary or secondary. Emphasize preflight, configuration, limitations, rigging, briefing, loading, execution, checklists, and emergency procedures. A [DD Form 365-4](#) shall be completed with emphasis on center of gravity and less airdrop load block.

Performance Standards. Per NFM, TACMAN/NTTP, NAVAIR 01-75GAA-9, and Core Skill Advanced Training guide. If flown utilizing NVDs the MAWTS-1 Fixed Wing NVD Manual applies.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. MHE and USMC Aerial Delivery Platoon, or other service equivalent.

4. Assault Landing Zone (ALZ)

a. Purpose. Introduce, and maintain proficiency in COL.

b. General. A qualified T&R Instructor may instruct this sortie. If flown utilizing night systems, loadmaster must be NSQ or accompanied by an NSI.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. Utilize academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.

e. Flight Event Training (1 Event, 2.0 Hours)

ALZ-370 2.0 1 KC-130F/R/T A (N)

Goal. Introduce, and maintain proficiency in COL.

Requirement. Perform loadmaster duties during a day, night, or NS COL utilizing METHOD A cargo deck and ramp procedures. METHOD B procedures should be discussed. Emphasize cargo compartment preparation, protective equipment, expedient and safe loading/off-loading. Tactical considerations shall be discussed and/or performed.

Performance Standards. Per NFM, TACMAN/NTTP, NAVAIR 01-75GAA-9, and Core Skill Advanced Training guide. If flown utilizing NVDs the MAWTS-1 Fixed Wing NVD Manual applies.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. MHE.

434. CORE PLUS TRAINING

1. General. Upon completion of this phase, the loadmaster will be qualified to conduct Heavy Equipment (HE), Combination, High Altitude Low Opening/High Altitude High Opening (HALO/HAHO) AD, Flare Delivery, Search And Rescue (SAR), and Defensive Tactics (DEFTAC).

2. Aerial Delivery (AD)

a. Purpose. Continue instruction and maintain proficiency for airdrops.

b. General. A qualified T&R Instructor may instruct this stage. If flown utilizing NS, loadmaster must be NSQ or accompanied by an NSI. Any instructor may instruct the 444, but shall be designated as a QASO. If flown utilizing NS, the instructor must also be qualified and proficient in NS.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. Utilize academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.

e. Flight Event Training (1 Event, 2.0 Hours)

AD-441 2.0 1 KC-130F/R/T A (N)

Goal. Continue instruction and maintain proficiency in Heavy Equipment (HE) airdrop.

Requirement. Perform duties as the primary loadmaster (for initial event completion) during a day, night, or night systems HE airdrop from the ramp. Follow-on proficiency may be either primary or secondary. Emphasize preflight, configuration, limitations, rigging, briefing, loading, execution, checklists,

and emergency procedures. A DD Form 365-4 shall be completed with emphasis on center of gravity and less airdrop load block.

Performance Standards. Per NFM, TACMAN/NATTP, NAVAIR 01-75GAA-9, and Core Skill Plus Training guide. If flown utilizing NVDs the MAWTS-1 Fixed Wing NVD Manual applies.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. MHE and USMC Aerial Delivery Platoon, or other service equivalent.

AD-442 2.0 1 KC-130F/R/T A (N)

Goal. Introduce and maintain proficiency in HALO)/HAHO) airdrop.

Requirement. Perform duties as primary day, night, or night systems HALO/HAHO personnel or cargo airdrop from the ramp or paratroop doors. Emphasize preflight, configuration, rigging, briefing, oxygen/physiology requirements, loading, execution, standardized military free-fall hand signals, checklists, and emergency procedures. A DD Form 365-4 shall be completed with emphasis on center of gravity and less airdrop load block.

Performance Standards. Per NFM, TACMAN/NATTP, NAVAIR 01-75GAA-9, and Core Skill Plus Training guide. If flown utilizing NVDs the MAWTS-1 Fixed Wing NVD Manual applies.

Prerequisite. AD-241.

Ordinance. N/A

External Syllabus Support. USMC Force Reconnaissance Military Free-Fall or Ram Air Static Line parachutists and physiology observers, as required, or other service equivalent.

AD-443 2.0 1 KC-130F/R/T A (N)

Goal. Introduce and maintain proficiency in Combination (COMBO) airdrops consisting of equipment and parachutists.

Requirement. Perform duties as primary for initial event completion during a day, night, or NS COMBO airdrop from the ramp. Follow-on proficiency may be either primary or secondary. Emphasize preflight, configuration, limitations, rigging, briefing, loading, execution, checklists, and emergency procedures. A DD Form 365-4 shall be completed with emphasis on center of gravity and less airdrop load block.

Performance Standards. Per NFM, TACMAN/NATTP, NAVAIR 01-75GAA-9, and Core Skill Plus Training guide. If flown utilizing NVDs the MAWTS-1 Fixed Wing Night Vision Device Manual applies.

Prerequisite. AD-241 and AD-340 or AD-441 (as applicable).

Ordinance. N/A

External Syllabus Support. USMC Aerial Delivery Platoon, Force Reconnaissance, or other service equivalent authorized to conduct over the ramp airdrop operations.

AD-444

2.0

1 KC-130F/R/T A/S N

Goal. Introduce and maintain proficiency in Battlefield Illumination (BI).

Requirement. Perform duties as team member and/or team leader for a BI. Emphasize aircraft parachute flare (APF) acceptance, loading, securing, operation, and rigging for emergency jettison of the flare delivery system. Additional emphasis shall be on safety and emergency procedures. Initial event shall be flown. Follow-on instruction will lead to Quality Assurance Safety Officer (QASO) designation.

Performance Standards. Per NFM, TACMAN/NTTP, NAVAIR 01-75GAA-9, and Core Skill Plus Training guide.

Prerequisite. N/A

Ordinance. LUU-2 and LUU-19 series APF.

External Syllabus Support. Appropriate range facility for BI.

3. Search And Rescue (SAR)

a. Purpose. Introduce and maintain proficiency in SAR.

b. General. A qualified T&R Instructor may instruct this stage of training. If flown utilizing NS, loadmaster must be NSQ or accompanied by an NSI.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. Utilize academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.

e. Flight Event Training (1 Event, 2.0 Hours)

SAR-450

2.0

1 KC-130F/R/T A (N)

Goal. Introduce and maintain proficiency in SAR.

Requirement. Perform loadmaster duties during day, night, or NS SAR. Emphasize SAR techniques, inflight deployment of the LRU-13 liferaft, HF communications required for on-scene commander.

Performance Standards. Per NFM, TACMAN/NTTP, and Core Skill Plus Training guide. If flown utilizing NVDs the MAWTS-1 Fixed Wing Night Vision Device Manual applies.

Prerequisite. N/A

Ordnance. N/A

External Syllabus Support. N/A

4. Defensive Tactics (DEFTAC)

- a. Purpose. Introduce and maintain proficiency in DEFTAC.
- b. General. A WTI/DEFTACI pilot, or WTI loadmaster shall instruct this event.
- c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.
- d. Ground/Academic Training. Utilize academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.
- e. Flight Event Training (1 Event, 2.0 Hours)

DEFTAC-462 2.0 1 KC-130F/R/T A

Goal. Introduce and maintain proficiency in DEFTAC.

Requirement. Perform loadmaster duties as aft lookout and/or rear vision device lookout. Emphasize cargo compartment preparation, crew briefing, lookout doctrine, scanning for threats/terrain clearance, threat templates, and combat entry/exit checklists.

Performance Standards. Per NFM, TACMAN/NATTP, and Core Skill Plus Training guide.

Prerequisite. N/A

Ordnance. N/A

External Syllabus Support. Aggressor aircraft.

435. INSTRUCTOR TRAINING

1. Training And Readiness Instructor (TRI)

- a. Purpose. Qualify as a TRI.
- b. General
 - (1) Squadron NATOPS Instructor (SNI) or higher shall evaluate this stage of training.
 - (2) A minimum of 1,000 flight hours in the KC-130FRT is required.
 - (3) Core Skill Basic training shall be complete and Core Skill Advanced training should be complete.
- c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. Utilize Instructor series academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.

e. Flight Event Training (1 Event, 4.0 Hours)

TRI-590 4.0 E 1 KC-130F/R/T A (N)

Goal. Qualify as a TRI.

Requirement. Demonstrate the ability to instruct all responsibilities and duties for Core Skill Basic and Core Skill Advanced training.

Performance Standards. Per NFM, MAWTS-1 Course Catalog, and IUT guide.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. N/A

2. NATOPS Instructor (NTPSI)

a. Purpose. Qualify as a NATOPS Evaluator, NATOPS Instructor, or Assistant NATOPS Instructor.

b. General

(1) The model manager shall evaluate the NATOPS Evaluator.

(2) The NATOPS Evaluator shall evaluate the NATOPS Instructor.

(3) The NATOPS Evaluator or Instructor shall evaluate the Assistant NATOPS Instructors.

(4) Open and closed book examinations shall be complete prior to this evaluation.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. N/A

e. Flight Event Training (1 Event, 4.0 Hours)

NTPSI-591 4.0 E 1 KC-130F/R/T A (N)

Goal. Qualify as a NATOPS Evaluator, NATOPS Instructor, or Assistant NATOPS Instructor.

Requirement. Demonstrate the ability to evaluate a loadmaster in NATOPS procedures.

Performance Standards. Per NFM.

Prerequisite. TRI-590.

Ordinance. N/A

External Syllabus Support. N/A

3. Night Systems Instructor (NSI).

a. Purpose. Qualify as a NSI.

b. General. See MAWTS-1 Course Catalog

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. Utilize academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.

e. Flight Event Training (1 Event, 4.0 Hours)

NSI-592 4.0 E 1 KC-130F/R/T A NS

Goal. Qualify as a NSI.

Requirement. Per the MAWTS-1 Course Catalog.

Performance Standards. Per NFM, MAWTS-1 Fixed Wing Night Vision Device Manual, TACMAN/NATTP, and MAWTS-1 Course Catalog.

Prerequisite. TRI-590, RQD-604.

Ordinance. N/A

External Syllabus Support. MAWTS-1 Staff Instructor.

4. Weapons Tactics Instructor (WTI)

a. Purpose. Qualify as a WTI.

b. General. A WTI candidate shall meet the prerequisites contained in the MAWTS-1 course catalog and WTI Planning Guide. The WTI Planning guide is available on the MAWTS-1 NIPRNET Website.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. Utilize academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.

e. Flight Event Training (1 Event, 4.0 Hours)

WTI-593 4.0 E 1 KC-130F/R/T A (N)

Goal. Qualify as a WTI.

Requirement. Per MAWTS-1 Course Catalog.

Performance Standards. Per NFM, MAWTS-1 Fixed Wing NVD Manual, TACMAN/NTTP, and MAWTS-1 Course Catalog.

Prerequisite. TRI-590, RQD-604.

Ordinance. 15 LUU-2X/X/19X, 140 MJU-8, 160 RR-129.

External Syllabus Support. MAWTS-1.

436. REQUIREMENTS, QUALIFICATIONS, AND DESIGNATIONS

1. Rapid Ground Refueling (RGR)

a. Purpose. Evaluate and designate as a RGR Supervisor and Taxi Director.

b. General. Upon completion of this flight, the loadmaster shall be capable of planning, briefing, and executing an RGR mission as a Refueling Supervisor and Taxi Director. The squadron commanding officer may then designate the loadmaster as an RS and RGR taxi director.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. Utilize academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.

e. Flight Event Training (2 Events, 4.0 Hours)

<u>RGR-601</u>	<u>2.0</u>	<u>1 KC-130F/R/T A (N)</u>
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Goal. Evaluate and designate as a RGR Supervisor and Taxi Director.

Requirement. Perform duties as a Refueling Supervisor (RS) during a day or NS RGR, minimum 2 point setup, including actual transfer of fuel to rotary wing. Emphasize planning, briefing, inspection and configuration of equipment, site setup, hand and arm signals, lighting and marking, RS duties, safety, emergency procedures, and site teardown. Additionally, the RS will taxi-direct rotary wing aircraft.

Performance Standards. Per NFM and TACMAN/NATTP. If flown utilizing NVD the MAWTS-1 Fixed Wing NVD Manual applies.

Prerequisite. RGR-273, 274.

Ordinance. N/A

External Syllabus Support. Rotary wing aircraft.

2. Aerial Delivery (AD)

a. Purpose. Evaluate and qualify as a QASO) for BI.

b. General. Upon completion of this training, the loadmaster shall be capable of accepting and loading APF, rigging the aircraft for BI, and conducting a BI flight. Emphasize emergency oxygen/smoke mask requirements and flare emergencies to include; flare timer separation and flare stowage box jettison.

c. Crew Requirements. Minimum crew as required by NFM or NTTP/TACMAN as required for flight events.

d. Ground/Academic Training. Utilize academic courseware as outlined in the appropriate KC-130FRT chapter of the MAWTS-1 Course Catalog.

e. Flight Event Training (2 Events, 4.0 Hours)

QASO-602 2.0 1 KC-130F/R/T A N

Goal. Evaluate and qualify as a QASO) for BI.

Requirement. Perform duties as QASO. Emphasize APF acceptance, loading, securing, operation, and rigging the flare delivery system for emergency jettison. Additional emphasis shall be on safety and emergency procedures.

Performance Standards. Per NFM, TACMAN/NTTP, NAVAIR 01-75GAA-9, and Core Skill Basic Training guide.

Prerequisite. AD-444.

Ordinance. LUU-2 or LUU-19 series APF.

External Syllabus Support. Ordnance-qualified personnel.

4. Requirements (RQD)

a. Purpose. Provide tracking codes only for specific qualifications or designations.

CPL-603 Goal. Provide a tracking code when complete with CPL events.

Prerequisite. CPL-215, 216, 217, 218.

NSQ-604 Goal. Provide a tracking code when Night System Qualified (NSQ).

Prerequisite. NS-204, AR-213, TACNAV-223, and ALZ-272.

TRI-605 Goal. Provide a tracking code when qualified as a T&R Instructor.

Prerequisite. 1,000 total flight hours in series, Core Skill Basic shall be complete, Core Skill Advanced should be complete; TRI-590.

NTPSI-606 Goal. Provide a tracking code when qualified as a NATOPS Instructor.

Prerequisite. T&R Instructor and evaluated by appropriate evaluator or instructor for the designation received; NTPSI-591.

NSI-607 Goal. Provide a tracking code when qualified as a NS Instructor.

Prerequisite. Complete the prescribed course contained in the MAWTS-1 Course Catalog; NSI-592.

WTI-608 Goal. Provide a tracking code when qualified as a WTI.

Prerequisite. Complete the WTI instructor course POI conducted by MAWTS-1; WTI-593.

5. NATOPS

a. Purpose. Evaluate NATOPS requirements.

b. General

(1) KC-130FRT Loadmaster NATOPS Evaluator, NATOPS Instructor, or Assistant NATOPS Instructor shall evaluate this flight.

(2) Open and closed book examinations shall be complete prior to NATOPS flight evaluation.

(3) CRM lecture must be complete prior to this flight.

(4) Any other requirements as dictated by NATOPS and local directives.

c. Crew Requirements. Minimum crew as required by NFM or NTPP/TACMAN as required for flight events.

d. Ground/Academic Training. CRM lecture.

e. Flight Event Training (1 Flight, 4.0 Hours)

NTPS-690 4.0 E 1 KC-130F/R/T A (N)

Goal. Evaluate NATOPS requirements.

Requirement. The loadmaster will demonstrate the ability to meet NATOPS requirements.

Performance Standard. Per NFM.

Prerequisite. N/A

Ordinance. N/A

External Syllabus Support. N/A

460. EXPENDABLE ORDNANCE REQUIREMENTS

BASIC/TRANSITION/CONVERSION/REFRESHER

ORDNANCE	100 SERIES	200 SERIES	300 SERIES	400 SERIES	IUT	ANNUAL
MJU-8		140				140
RR-129						
RR-144						
*LUU-2A/B,B/B				30	15	15
*LUU-19				30	15	15

*Note; LUU-2 and LUU-19 series APFs are interchangeable for loadmaster training requirements. The numbers in each column represent the total number required for loadmaster training.

461. SYLLABUS MATRIX

CORE SKILL INTRODUCTION TRAINING

STAGE	CODE	HRS	SIM HRS	REFL Y	CRP	SIM CRP	SC	R	E	N	NS	
CPL	100	0.0	3.0	*	2.0	1.0						S
CPL	101	0.0	3.0	*	2.0	1.0						S
CPL	102	0.0	3.0	*	2.0	1.0						S
CPL	103	0.0	3.0	*	2.0	1.0						S
CPL	104	0.0	3.0	*	2.0	1.0						S
CPL	105	0.0	3.0	*	5.0	1.0			X			S
AR	110	2.0		*	3.0	0.0						
AR	111	2.0		*	3.0	0.0						
AR	112	2.0		*	5.0	0.0			X			
FAM	115	4.0		*	3.0	0.0	X					
FAM	116	4.0		*	3.0	0.0	X					
FAM	117	4.0		*	5.0	0.0	X		X			
OW	150	6.0		*	3.0	0.0	X					
LRNAV	151	6.0		*	3.0	0.0	X					
LRNAV	152	6.0		*	5.0	0.0	X		X			
RGR	170	0.0		*	3.0	1.0						S
NATOPS	190	4.0		*	9.0	0.0			X			
TOTAL 100	17	40.0	18.0		60.0	7.0						

CORE SKILL BASIC

STAGE	CODE	HRS	SIM HRS	REFLY	CRP	SIM CRP	SC	R	E	N	NS	REMARKS
NS	204	2.0		*	1.0		X	X			NS	A
AR	210	2.0		365	0.5			X				A
AR	211	2.0		365	1.0					N		A
AR	213	2.0		365	1.0						NS	A
CPL	215	2.0		365	1.0			X		(N)		A
CPL	216	2.0		365	1.0			X		(N)		A/S
CPL	217	2.0		365	1.0			X		(N)		A/S
CPL	218	2.0		365	1.0			X		(N)		A/S
TACNAV	220	2.0		365	0.5			X				A
TACNAV	223	2.0		365	1.0						NS	A
AD	241	2.0		180	1.0					(N)		A
LRNAV	250	8.0		365	1.0			X		(N)		A
THRXI	261	2.0		365	1.0		X			(N)		A
ALZ	271	1.5		365	0.5							A
ALZ	272	1.5		365	1.0						NS	A
RGR	273	2.0		365	0.5							A
RGR	274	2.0		365	1.0						NS	A
TOTAL 200	17	39			15.0							
TOTAL EVENT	34	65	18.0		75.0	7.0						

CORE SKILL ADVANCED

STAGE	CODE	HRS	SIM HRS	REFLY	CRP	SIM CRP	T	C	SC	R	E	N	NS	REMARKS
TACNAV	322	2.0		365	7.0									A
AD	340	2.0		180	6.0				X			(N)		A
ALZ	370	2.0		365	7.0							(N)		A
TOTAL	3	6.0			20.0									
TOTAL 100, 200,300	37	71	18.0		95.0	7.0								

CORE PLUS

STAGE	CODE	HRS	SIM HRS	REFLY	CRP	SIM CRP	SC	R	E	N	NS	REMARKS
AD	441	2.0		180	1.0					(N)		A
AD	442	2.0		180	1.0							A
AD	443	2.0		365	1.0					(N)		A
AD	444	2.0		365	1.0					N		A
SAR	450	2.0		365	0.5					(N)		A
DEFTAC	462	2.0		365	0.5							A
TOTAL	6.0	12.0			5.0							
TOTAL 100, 200, 300,400	43	83	18.0		100	7.0						

INSTRUCTOR TRAINING

STAGE	CODE	HRS	NOTES
TRI	590	4.0	RQD-605 (N) E
NTPSI	591	4.0	RQD-606 (N) E
NSI	592	4.0	RQD-607 NS E
WTI	593	4.0	RQD-608 (N) E

REQUIREMENTS, QUALIFICATIONS, AND DESIGNATIONS

STAGE	CODE	HRS	TRACK	NOTES
RGR	601	2.0		(N)
QASO	602	2.0		N
CPL	603		X	
NSQ	604		X	
TRI	605		X	
NTPSI	606		X	
NSI	607		X	
WTI	608		X	
NATOPS	690	4.0	X	

462. T&R CHAINING TABLES. Event chaining allows for the completion of more complex and/or advanced events using the same skills to update proficiency status of events. Only events in a sequence entailing demonstration of equivalent skills shall be chained.

a. When a T&R event is logged, the proficiency dates of other T&R events (usually lower in number) may be updated. The T&R code that is logged is known as the "chaining code," and the updated codes are "chained codes." Chained codes are not always updated when a chaining code is logged.

b. Conditional Chaining. The following environmental conditions further specify which T&R codes are chain-updated:

(1) Night Optional. Chained codes annotated with parentheses around them, e.g. (200), are only chain-updated if the chaining code is flown at night.

(2) Night Systems Optional. Chained codes annotated with parentheses and NS after them, e.g. (200 NS), are only chain-updated if the chaining code is flown using night systems.

(3) Light Level Optional. Chained codes annotated with parentheses and "HLL" after them, e.g. (200 HLL), are only chain-updated if the chaining code is flown using night systems during a high light level period. Chained codes annotated with parentheses and "LLL" after them, e.g. (200 LLL), are only chain-updated if the chaining code is flown using night systems during a low light level period.

c. Syllabus Event Conversion Matrix. The syllabus event conversion matrix is used to convert T&R syllabus event proficiency status of the previous T&R syllabus into event proficiency status of the current T&R for individuals.

EVENT UPDATE CHAINING

STAGE	FLIGHT	FLIGHT UPDATED
AR	211	210
AR	213	210
TACNAV	223	204, 220
ALZ	272	204, 271
RGR	274	204, 273
TACNAV	322	220
AD	443	241

OLD STAGE	OLD TRAINING CODE	NEW STAGE	NEW TRAINING CODE
CPL	100	CPL	100
CPL	101	CPL	101
CPL	102	CPL	102
CPL	103	CPL	103
CPL	100	CPL	104
CPL	104	CPL	105
AR	110,111	AR	110
AR	110,112	AR	111
AR	114	AR	112
FAM	115	FAM	115
FAM	116	FAM	116
FAM	117	FAM	117
OW	150,151	OW	150
OW	152,153	OW	151
OW	154	OW	152
RGR	170	RGR	170
CK	190	CK	190
SNSQ	380,381,382	NS	204
AR	210	AR	210
AR	211	AR	211
NSQ	383	NSAR	213
CPL	203	CPL	215
CPL	203	CPL	216
CPL	203	CPL	217
CPL	203	CPL	218
LL	220	TACNAV	220
NSQ	480	TACNAV	223
AD	340	AD	241
OW	250	LRNAV	250
ASE	460	THRXI	261
ERO	270	ALZ	271
NSQ	385	ALZ	272
RGR	272	RGR	273
NSQ	384	RGR	274
LAT	420	TACNAV	322
AD	341	AD	340
COL	271	ALZ	370
AD	342	AD	441
AD	343	AD	442
AD	240	AD	443
FD	344	AD	444
SAR	650	SAR	450
DEFTAC	461	DEFTAC	462
CK	590	TRI	590
CK	591	NTPSI	591
NSI	592	NSI	592
WTI	593	WTI	593
RGR	372,373	RGR	601
FD	345	QASO	602
CPL	203	CPL	603
NSQ	390	NSQ	604
INST	590	TRI	605
NI/ANI	591	NTPSI	606
NSI	592	NSI	607
WTI	593	WTI	608
CK	290	NTPS	690

T&R MANUAL, KC-130FRT

CHAPTER 5

KC-130 FLIGHT MECHANIC

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CHAPTER 5

KC-130 FLIGHT MECHANIC

500. MARINE AERIAL REFUELING SQUADRON (KC-130FRT) UNIT CORE COMPETENCY

1. Background. Marine Aviation plays a crucial role in the MAGTF's ability to conduct Maneuver Warfare. The ultimate goal of Marine Aviation is to attain the highest possible combat readiness to support Expeditionary Maneuver Warfare while at the same time preserving and conserving our Marines and equipment. Embedded within our combat readiness is the ability to rapidly, effectively, and efficiently deploy on short notice and the ability to quickly and effectively plan for crises and/or contingency operations thereby ensuring Marine Aviation remains ready for combat when and where the need arises. The KC-130FRT T&R Manual represents the collaborative effort of KC-130FRT Subject Matter Experts who designed training standards to maximize the full combat capabilities of the KC-130FRT and its crew. These standards, intrinsic in the core competency section, describe and define unit capabilities and requirements necessary to maintain like-squadron proficiency in core skills and combat leadership. Training events are based on specific requirements and performance standards to ensure aircrew maintain a common base of training and depth of combat capabilities. Together, the T&R comprises a building block approach to ensure that trained aircrews remain ready, relevant, and fully capable of supporting the MAGTF commander.

2. VMGR Mission. Support the MAGTF Commander by providing aerial refueling and assault support, day or night under all weather conditions during expeditionary, joint, or combined operations.

3. Mission Essential Task List (METL)

- a. (UJTL TA 1.1.1) Conduct Tactical Airlift
 - Conduct assault support transport.
- b. (UJTL TA 1.1.4) Conduct Sea and Air Deployment Operations
 - Maintain the capability to deploy and operate from advanced bases, expeditionary airfields and forward operating bases.
 - Perform organizational maintenance on assigned aircraft.
- c. (UJTL TA 1.2.2) Conduct Airborne Operations
 - Provide air delivered assault support transport of combat troops, equipment and supplies.
 - Provide support for casualty evacuation operations.
 - Maintain self-defense capability from ground-to-air and air-to-air threats.
- d. (UJTL TA 4.2) Distribute Supplies and Provide Transport Services
 - Conduct aerial re-supply.
 - Provide support for mobile Forward Arming and Refueling Points (FARPS).
 - Provide support for Rapid Ground Refueling (RGR) of aircraft and vehicles.
- e. (UJTL TA 4.2.3) Conduct Air Refueling
 - Provide Tactical and Long Range Aerial Refueling.
- f. (UJTL TA 5) Exercise Command and Control

- Provide Airborne Platform for the Airborne DASC Command Post.
- g. (UJTL TA 6.2) Conduct Joint Personnel Recovery
 - Conduct Tactical Recovery of Aircraft and Personnel (TRAP) operations.
 - Augment local Search and Rescue (SAR) assets
- h. (UJTL TA 6.4) Conduct Noncombatant Evacuation
 - Provide support for evacuation operations.

4. Table of Organization. Refer to Table of Organization 8820 and 8821 managed by Total Force Structure, MCCDC, for current authorized organizational structure and personnel strength for KC-130FRT units. As of this publication date, KC-130F/R/T units are authorized:

Squadron
 12 Aircraft
 42 Pilots [26 TPC/16 CP (T2P or T3P)]
 23 TSOs
 25 Flight Engineers
 24 Loadmasters
 24 Flight Mechanics

Detachment
 6 Aircraft
 19 Pilots [11 TPC/8 CP (T2P or T3P)]
 11 TSOs
 12 Flight Engineers
 12 Loadmasters
 12 Flight Mechanics

5. Core Capability. A core capable squadron is able to sustain 9 sorties on a daily basis during contingency/combat operations. The above sortie rates are based on 3.0 hour average sortie duration and assumes > 70 percent FMC aircraft and > 90 percent T/O aircrew on hand. If unit FMC aircraft < 70 percent or T/O aircrew < 90 percent, core capability will be degraded by a like percentage. A core capable squadron is able to accomplish all tasks designated in the unit METL from a main or expeditionary base.

6. METL/Core Skill Matrix. KC-130FRT core skills directly support the METL as follows:

	KC-130FRT CORE SKILL										CORE PLUS	
METL	AR	TACNAV	FORM	RGR	LRNAV	THRX (I)	THRX (R)	ALZ	NSQ	AD	LRAR	DEFTAC
A. Conduct Tactical Airlift		X	X		X	X	X	X	X			X
B. Conduct Sea and Air Deployment Operations			X		X	X	X	X	X		X	X
C. Conduct Airborne Operations		X	X		X	X	X		X	X		X
D. Distribute Supplies and Provide Transport Services		X		X	X	X	X	X	X	X	X	X
E. Conduct Air Refueling	X	X	X		X	X	X		X		X	X
F. Exercise Command and Control					X	X	X		X			X
G. Conduct Joint Personnel Recovery	X	X	X	X	X	X	X	X	X	X	X	X
H. Conduct Noncombatant Evacuation	X	X	X	X	X	X	X	X	X		X	X

7. KC-130FRT Core Model Minimum Requirements (CMMR). Squadron core competency reflects the minimum level of competency a squadron must achieve to perform its core capability. Squadron core competency is measured in terms of minimum Core Skill Proficiency (CSP) and minimum numbers of flight leaders per paragraphs a and b below:

a. Minimum Unit CSP Requirements. As a minimum, in order to be considered Core Competent, a unit must possess the following numbers of crews who are proficient in each core skill (Unit CSP). In order to be considered proficient in a core skill (individual CSP), a crewmember must attain and maintain proficiency in core skill events, as delineated in paragraphs (1) and (2) below.

* NOTE: DEFTAC and Long Range AAR (LRAR) are core plus skills. Proficiency in DEFTAC and LRAR is not required to obtain unit CSP and will not contribute to unit T-level readiness. Below are KC-130 community recommended unit/individual CSP standards for these skills.

KC-130FRT Unit CSP Requirements							
CORE SKILL *CORE PLUS	Pilot	Copilot	TSO	FE	LM	FM	Crews
AR	14	14	14	14	14	14	14
TACNAV	9	9	9	9	9	9	9
FORM	8	8		8			8
LRNAV	12	12	12	12	12	12	12
THRX(I)	6	6	6	6	6	6	6
THRX(R)	8		4	4			4
ALZ	9	9	9	9	9	9	9
RGR	6	6		6	6	6	6
NSQ	9	9	9	9	9	9	9
AD	4	4	4	4	8	4	4
**CPL					18		18
*LRAR	2		2				1
*DEFTAC	2/2		2	2	2	2	2

KC-130FRT Unit CSP Requirements Detachment							
CORE SKILL	Pilot	Copilot	TSO	FE	LM	FM	Crews
AR	7	7	7	7	7	7	7
TACNAV	5	5	5	5	5	5	5
FORM	4	4		4			4
LRNAV	6	6	6	6	6	6	6
THRX(I)	3	3	3	3	3	3	3
THRX(R)	4		2	2			2
ALZ	5	5	5	5	5	5	5
RGR	3	3	3	3	3	3	3
NSQ	5	5	5	5	5	5	5
AD	2	2	2	2	4	2	2
**CPL					9		9
LRAR	1		1				1
DEFTAC	4		2	2	2	2	2

** CPL is the Cargo and Passenger Loading core skill that applies to loadmasters only and is not included in the METL Core Skill Matrix.

(1) Events Required to Attain Individual CSP. To initially attain CSP, a crewmember must successfully complete all of the T&R events listed in the chart below for that core skill:

KC-130 Flight Mechanic	RW/FW AR	RGR	ALZ EAF	AD	FORM	LONG RANGE NAV	TACNAV	THRX(I)	THRX(R)	NS	DEFTAC
T&R event requirements to attain competency	210 211* 212 213* 313	274*	271* 272	241*	231*	250*	220* 223 224 321	260*	360	203* 204*	461 462
Notes: 1. Some events are duplicated in more than one category but not in the overall total. 2. "*" Denotes a Refresher Flight Mechanic or someone who needs to regain qualification(s).											

(2) Events Required to Maintain Individual CSP. To maintain CSP, a crewmember must maintain proficiency in all of the T&R events listed in the chart below for that core skill.

KC-130 Flight Mechanic	RW/FW AR	RGR	ALZ EAF	AD	FORM	LONG RANGE NAV	TACNAV	THR(X)I	THR(X)R	NS	DEFTAC
T&R event requirements to maintain competency	211 213	274	271	241	231	250	224 321	260	360	204 205	461 462

b. Minimum Combat Leader Requirements. NA.

8. Qualifications And Designations Table. The table below delineates T&R events required to be completed to attain initial qualifications, re-qualifications, and designations. All stage lectures, briefs, squadron training and prerequisites shall be complete prior to completing final events. Qualification and designation letters signed by the commanding officer shall be placed in individual NATOPS and APR/MPR jackets. Loss of proficiency in all qualification events of a core skill causes the associated qualification to be lost. Regaining a qualification requires completing all R coded syllabus events associated with that qualification.

<u>Qualification</u> (TRACKING CODE)	Initial Event Qualification Requirements.
RVD (605)	DEFTAC 461, DEFTAC 462
NSQ (611)	NS-204, NS-205, TACNAV-223, TACNAV-224, RQD-611 and a designation letter signed by the commanding officer.
Flight Mech Initial Evaluation (680)	Core Introduction Phase complete and a designation letter signed by commanding officer.
Flight Mech Core Basic Evaluation (681)	Core Basic Phase Complete.

<u>Designation</u> (TRACKING CODE)	Initial Event Designation Requirements.
Flight Mech Annual NATOPS (682)	Annual NATOPS Re-qualification

9. Definitions

a. Currency. A control measure used to provide an additional margin of safety based on exposure frequency to a particular skill. It is a measure of time since the last event demanding that specific skill. Loss of currency does not affect a loss of Combat Readiness Percentage (CRP). For example, currency determines minimum altitudes in rules of conduct based upon the most

recent low altitude fly date. Specific currency requirements for individual type mission profiles can be found in the Aviation T&R Program Manual.

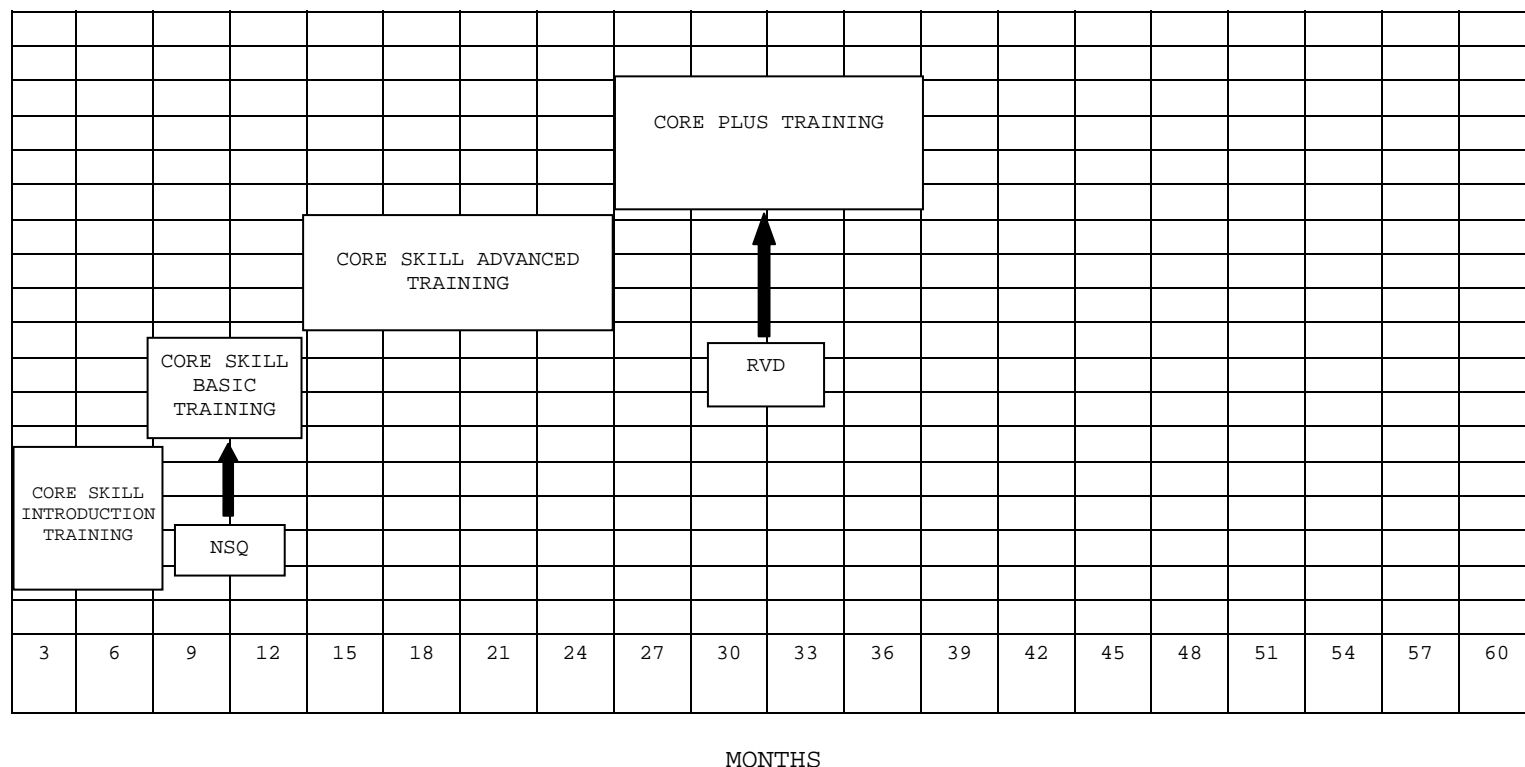
b. Proficiency. Proficiency is a measure of achievement of a specific skill. Re-fly factors establish the maximum time between demonstration of those particular skills. CRP is a measurement of "demonstrated proficiency." If an aircrew exceeds the re-fly factor for a particular event, the individual loses CRP for that particular event. To regain proficiency, an individual shall complete the delinquent event with a proficient crewman/flight lead. If an entire unit loses proficiency, unit instructors shall regain proficiency by completing an event with instructors from a like unit. If not feasible, the instructor shall regain proficiency by completing the event with another instructor. If a unit has only one instructor and cannot complete the event with an instructor from another unit, he shall regain proficiency with another aircraft commander or as designated by his commanding officer.

c. Qualification. A qualification is a status assigned to personnel based on demonstration of proficiency in a specific skill. Specific criteria to achieve qualifications shall be delineated in individual T&R chapters. Upon successful completion of qualification criteria, commanding officers may issue an appropriate qualification letter for inclusion in the NATOPS jacket and APR/MPR. Aircrew do not lose a qualification as a function of re-fly factor for individual events. Loss of proficiency (delinquent re-fly factor) for all associated qualification core skill events constitutes loss of that qualification. Re-qualification requires demonstration of proficiency. Specific re-qualification criteria shall be delineated in individual T&R chapters.

d. Designation. A designation is a status assigned to an individual based on leadership ability. A designation is a command specific, one-time occurrence and remains in effect until removed for cause. Specific designation requirements shall be delineated in individual T&R chapters. Commanders shall issue a designation letter to the individual upon the occasion of original designation, with appropriate copies for inclusion in the NATOPS jacket and APR.

10. KC-130FRT Flight Mechanic Progression Model. The training progression model below provides recommended core skill, qualification, and designation attainment timelines for the average flight mechanic.

KC-130 FLIGHT MECHANIC CORE PROGRESSION MODEL



501. PROGRAM OF INSTRUCTION (POI) FOR BASIC FLIGHT MECHANIC

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-6	NACCS	NAS Pensacola, FL
7-13	KC-130 Flight Mechanic Ground	CNATT-MARU
14-26	Core Skill Introduction Training	Training Squadron
27-52	Core Skill Basic Training	Tactical Squadron
53-105	Core Skill Advanced Training	Tactical Squadron
106-158	Core Plus Training	Tactical Squadron

502. POI FOR REFRESHER FLIGHT MECHANIC

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-8	Core Skill Basic Training	Tactical Squadron

503. POI FOR CONVERSION FLIGHT MECHANIC

<u>WEEKS</u>	<u>COURSES/PHASE</u>	<u>ACTIVITY</u>
1-3	Core Skill Basic Training	Tactical Squadron

510. GROUND TRAINING COURSES OF INSTRUCTION

<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
Naval Aircrew Candidate Course	NAS Pensacola, FL
Flight Mechanic Maintenance Course	CNATT-MARU CHPT, NC
Flight Mechanic Flight Course	VMGRT-253 CHPT, NC
Weapons and Tactics Course (WTI)	MAWTS-1 Yuma, AZ
Advanced Airlift Tactics Training Course	St. Joseph, MO.
Survival, Evasion, Resistance and Escape	NAS Brunswick, ME
	NAS North Island, CA

511. AIRCREW TRAINING REFERENCES. The following references shall be utilized to ensure safe and standardized training procedures, grading criteria, and aircraft operation:

NATOPS General Flight and Operating Instructions (OPNAVINST 3710.7)
 NATOPS Flight Manuals (NFM)
 NATOPS Instrument Flight Manual (NIFM)
 NATOPS Air-to-Air Refueling Manual (AAR Manual)
 KC-130 Tactical Manual (TACMAN)
 T&R Program Manual
 MAWTS-1 Course Catalog
 Allied Tactical Publication - 56 (ATP-56) Air to Air Refueling
 Flight Clearance (FC) - issued by NAVAIR

520. EVENT TRAINING BASIC FLIGHT MECHANIC1. Core Skill Introduction Training

<u>STAGE</u>	<u>FLIGHTS</u>	<u>HOURS</u>	<u>PERCENT</u>
Familiarization	13	52.0	55.0
Flight Mechanic Evaluation	1	4.0	5.0
TOTAL	14	56.0	60.0

2. Core Skill Basic Training

<u>STAGE</u>	<u>FLIGHTS</u>	<u>HOURS</u>	<u>PERCENT</u>
Familiarization	1	2.0	0.5
Night Systems	2	4.0	3.0
Air Refueling	4	16.0	4.0
TAC NAV	3	8.0	2.5
Formation	1	3.0	1.5
Air Delivery	2	6.0	1.0
Over Water ICAO	1	8.0	1.0
Threat Reaction	1	2.0	1.0
Assault Landing Zone	2	4.0	2.0
Rapid Ground Refueling	1	0.0	1.0
TOTAL	15	49.0	15.0

3. Core Skill Advanced Training

<u>STAGE</u>	<u>FLIGHTS</u>	<u>HOURS</u>	<u>PERCENT</u>
Tactical Navigation	1.0	3.0	10.0
Threat Reaction	1.0	3.0	10.0
TOTAL	2	6.0	20.0

4. Core Plus Training

<u>STAGE</u>	<u>FLIGHTS</u>	<u>HOURS</u>	<u>PERCENT</u>
Tactical Navigation	1	2.0	1.0
Aerial Delivery	2	2.0	1.0
DEFTAC	2	4.0	2.0
Assault Landing Zones	1	2.0	1.0
	<u>6</u>	<u>10.0</u>	<u>5.0</u>
TOTAL	37	116.0	100.0

521. REFRESHER FLIGHT MECHANIC1. Core Skill Introduction Training

<u>STAGE</u>	<u>FLIGHTS</u>	<u>HOURS</u>
Familiarization	13	52.0
NATOPS Evaluation	<u>1</u>	<u>4.0</u>
TOTAL	14	56.0

522. CONVERSION FLIGHT MECHANIC1. Core Skill Basic Training

<u>STAGE</u>	<u>FLIGHTS</u>	<u>HOURS</u>
Systems Review	4.0	16.0

530. EVENT PERFORMANCE REQUIREMENTS

1. Purpose. Familiarize the student flight mechanic in correct procedures for: turnaround inspections (preflight/post flight), servicing, engine start, taxi, run up, takeoff, cruise, descent, landing and securing, and normal and emergency procedures.

2. Ground Training. Each aircraft system introduced in the core skill introduction stage requires a minimum of 4.0 hours ground instruction, unless otherwise noted.

3. Crew Resource Management (CRM). CRM shall be briefed for all flights and/or events.

531. CORE SKILL INTRODUCTION TRAINING1. Familiarization

a. Purpose. Familiarize the student with the duties and procedures of the flight mechanic per current instructions.

b. General. Flight mechanic instructor will instruct student on all flights in this stage.

c. Crew Requirements. NATOPS minimum flight crew, to include, Flight Mechanic instructor IAW NAVAIR 01-75GAA-1.

d. Ground/Academic Training. Prior to each flight, 4.0 hours of ground instruction are required.

e. Flight Training (14 Flights, 56.0 Hours)

FAM-000

4.0R 1 KC-130 A

Goal. Introduce the student to turnaround inspections (preflight/post flight), squadron SOP, normal and emergency procedures.

Requirement. Flight mechanic instructor will instruct student flight mechanic on correct turnaround inspections (preflight/post flight), squadron SOP, normal and emergency procedures per current instructions.

Performance Standard. The student flight mechanic will be familiar with turnaround inspections (preflight/post flight), squadron SOP, normal and emergency procedures per current instructions.

Prerequisites. Flight Mechanic Ground Course.

Ordinance. N/A

External Syllabus Support. N/A

FAM-1004.0R 1 KC-130 A

Goal. Refine the student to turnaround inspections (preflight/post flight).

Requirement. Flight mechanic instructor will instruct student flight mechanic on correct turnaround inspections (preflight/post flight) per current instructions.

Performance Standard. Upon completion, the student flight mechanic will be familiar with turnaround inspections (preflight/post flight) per current instructions.

Prerequisite. FAM-000.

Ordinance. N/A

External Syllabus Support. N/A

FAM-1014.0R, C 1 KC-130 A

Goal. Familiarize the student flight mechanic on aircraft engine and GTC/APU systems.

Requirement. Flight mechanic instructor will instruct the student flight mechanic on aircraft engines.

Performance Standard. Upon completion, the student flight mechanic will be familiar with aircraft engines, operation, possible malfunctions, and component locations.

Prerequisites. FAM-000, FAM-100

Ordinance. N/A

External Syllabus Support. N/A

<u>FAM-102</u>	<u>4.0</u>	<u>R 1 KC-130 A</u>	<p><u>Goal.</u> Familiarize the student flight mechanic with aircraft propeller systems.</p> <p><u>Requirement.</u> Flight mechanic instructor will instruct the student flight mechanic on aircraft propeller systems.</p> <p><u>Performance Standard.</u> Upon completion, the student flight mechanic will be familiar with aircraft propellers, operation, possible malfunctions, and component locations.</p> <p><u>Prerequisites.</u> N/A</p> <p><u>Ordinance.</u> N/A</p> <p><u>External Syllabus Support.</u> N/A</p>
<u>FAM-103</u>	<u>4.0</u>	<u>R, C 1 KC-130 A</u>	<p><u>Goal.</u> Familiarize the student flight mechanic with aircraft electrical systems.</p> <p><u>Requirement.</u> Flight mechanic instructor will instruct the student flight mechanic on aircraft electrical systems.</p> <p><u>Performance Standard.</u> Upon completion, the student flight mechanic will be familiar with aircraft electrical systems operation, possible malfunctions, and component locations.</p> <p><u>Prerequisites.</u> FAM-000, FAM-100.</p> <p><u>Ordinance.</u> N/A</p> <p><u>External Syllabus Support.</u> N/A</p>
<u>FAM-104</u>	<u>4.0</u>	<u>R, C 1 KC-130 A</u>	<p><u>Goal.</u> Familiarize the student flight mechanic with aircraft bleed air and anti-icing/de-icing systems.</p> <p><u>Requirement.</u> Instructor flight mechanic will instruct the student flight mechanic on aircraft bleed air and anti-icing/de-icing systems.</p> <p><u>Performance Standard.</u> Upon completion, the student flight mechanic will be familiar with aircraft bleed air and anti-icing/de-icing systems operation, possible malfunctions, and component locations.</p> <p><u>Prerequisites.</u> FAM-000, FAM-100.</p> <p><u>Ordinance.</u> N/A</p> <p><u>External Syllabus Support.</u> N/A</p>
<u>FAM-105</u>	<u>4.0</u>	<u>R, C 1 KC-130 A</u>	<p><u>Goal.</u> Familiarize the student flight mechanic with aircraft fuel system.</p>

Requirement. Instructor flight mechanic will instruct the student flight mechanic on aircraft fuel systems.

Performance Standard. Upon completion, the student flight mechanic will be familiar with aircraft fuel systems, operation, possible malfunctions and component locations.

Prerequisites. FAM-000, FAM-100.

Ordinance. N/A

External Syllabus Support. N/A

FAM-106

4.0 R 1 KC-130 A

Goal. Familiarize the student flight mechanic on aircraft hydraulic systems.

Requirement. Instructor flight mechanic will instruct the student flight mechanic on hydraulic systems.

Performance Standard. Upon completion, the student flight mechanic will be familiar with aircraft hydraulic systems, their operation, possible malfunctions, and component locations.

Prerequisites. FAM-000, FAM-100.

Ordinance. N/A

External Syllabus Support. N/A

FAM-107

4.0 R, C 1 KC-130 A

Goal. Familiarize the student flight mechanic with aircraft air conditioning and pressurization and oxygen systems.

Requirement. Instructor flight mechanic will instruct student flight mechanic on aircraft air conditioning/pressurization systems.

Performance Standard. Upon completion, the student flight mechanic will be familiar with aircraft air conditioning/pressurization systems, operation, possible malfunctions, and component locations.

Prerequisites. FAM-000, FAM-100.

Ordinance. N/A

External Syllabus Support. N/A

FAM-108

4.0 R, C 1 KC-130 A

Goal. Familiarize the student flight mechanic on aircraft communication and navigation systems.

Requirement. Instructor flight mechanic will instruct student flight mechanic on aircraft communication and navigation systems.

Performance Standard. Upon completion, the student flight mechanic will be familiar with aircraft communication/navigation systems, operation, possible malfunctions, and component locations.

Prerequisites. FAM-000, FAM-100.

Ordinance. N/A

External Syllabus Support. N/A

FAM-109

4.0 R 1 KC-130 A

Goal. Familiarize the student flight mechanic on aerial refueling systems, fixed wing aerial refueling observer procedures and duties.

Requirement. Instructor flight mechanic will instruct student flight mechanic on aircraft aerial refueling systems and observer duties.

Performance Standard. Upon completion, the student flight mechanic shall be familiar with aerial refueling systems, operation, possible malfunctions, component locations and observer duties.

Prerequisites. FAM-000, FAM-100.

Ordinance. N/A

External Syllabus Support. Fixed wing receiver.

FAM-110

4.0 R 1 KC-130 A

Goal. Familiarize the student flight mechanic on helicopter aerial refueling procedures and observer duties.

Requirement. The student flight mechanic shall be familiar on helicopter aerial refueling procedures and observer duties.

Performance Standard. Upon completion, the student flight mechanic will be familiar with aerial refueling procedures and qualified as an aerial refueling observer.

Prerequisites. FAM-000, FAM-100.

Ordinance. N/A

External Syllabus Support. Rotary Wing Receiver

FAM-111

4.0 E, R 1 KC-130 A

Goal. Evaluate the student flight mechanic on aerial refueling procedures and observer duties.

Requirement. The student flight mechanic shall be familiar with aerial refueling procedures and observer duties.

Performance Standard. Upon completion, the student flight mechanic will be familiar with aerial refueling procedures and qualified as an aerial refueling observer.

Prerequisites. FAM-109, FAM-110.

Ordinance. N/A

External Syllabus Support. Fixed or rotary wing receiver.

FAM-112 4.0 R 1 KC-130 A

Goal. Familiarize the student flight mechanic on low level operations per current instructions.

Requirement. The student flight mechanic shall be familiar with low-level operations and procedures.

Performance Standard. Upon completion, the student flight mechanic will be familiar with low-level operations and procedures per TACMAN and NFM.

Prerequisites. FAM-000, FAM-100.

Ordinance. N/A

External Syllabus Support. N/A

FAM-113 4.0 R 1 KC-130 A

Goal. Review previous instructions as necessary.

Requirement. Instructor flight mechanic will review all previous instructions as necessary.

Performance Standard. Upon completion, the student flight mechanic will be familiar with low level procedures per current instructions.

Prerequisites. FAM-000 through FAM-112.

Ordinance. N/A

External Syllabus Support. N/A

2. Flight Mechanic NATOPS Initial Evaluation

- a. Purpose. Evaluate the student flight mechanic per NATOPS procedures.
- b. General. Flight mechanic evaluation will be conducted during this stage.
- c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event. See RQD-680 for event description.

532. CORE SKILL BASIC TRAINING

1. General. Upon completion of this phase of training, the flight mechanic will be day and NSQ in the non-LAT (NSQ) environment for the basic core skill mission areas. They include tactical navigation (TACNAV) in a threat

environment (THRX [I]), Assault Landing Zone operations (ALZ), FW/RW Air-To-Air Refueling (AR), Rapid Ground Refueling (RGR) operations and long-range operation. The focus will be on flight crew resource management, aircraft preflight preparation, location and use of emergency equipment, ground and in-flight emergency procedures, aircraft post flight procedures, systems operation, system malfunctions, corrective actions, fault isolation and in-flight fault isolation. At the completion of this phase, the flight mechanic (FM-2) shall be NATOPS qualified, designated a "Flight Mechanic 1" RQD-681. Flight mechanics receiving initial training shall be instructed by either current squadron flight engineer instructors, WTIs or NSIs (as required). Once they have completed the initial event, subsequent events shall be flown with like-qualified aircrew.

2. Familiarization

- a. Purpose. Maintain proficiency on administrative flights.
- b. General. Flight mechanic shall fly initial codes with a qualified instructor. Subsequent events may be flown with a qualified crew provided the flight mechanic meets the prerequisites.
- c. Crew Requirements. Minimum flight crew and flight engineer instructor.
- d. Academic/Ground Training. Each flight requires 1 hour of classroom instruction.

3. Administrative Flight

- a. Purpose. Maintain proficiency on administrative flights.
- b. Flight Training (1 flight, 2 Hours)

FM-200

2.0

1 KC-130 A

Goal. Maintain proficiency in normal and emergency procedures during day flight operations.

Requirement. Review normal and emergency procedures during day flight operations per current instructions.

Performance Standard. Upon completion, the student flight mechanic will be familiar with administrative flight procedures per current instructions.

Prerequisites. RQD-680.

Ordinance. NA

External Syllabus Support. NA

4. Night Systems Familiarization

- a. Purpose. To develop proficiency at operating aircraft at night using NVDs in a non-LAT environment.
- b. General. Flight mechanic receiving NS training shall be instructed by an NSI for all initial codes. Subsequent events and non-syllabus NS codes or NS optional codes may be initially flown with a proficient NSQ crewmember as long as the flight mechanic has the prerequisites for the event.

c. Crew Requirements. NATOPS minimum crew or greater, unless otherwise specified for the event.

d. Ground/Academic Training. MAWTS-1 NVD ASP courses and NITE lab (includes Night Vision Systems, N.S. Human Factors and Night Environment ASPs).

e. Flight Training (2 flights, 4 Hours)

NS-204 2.0 1 KC-130 A NS

Goal. HLL NVD Operations.

Requirement. Preflight shall include a flight station, cargo compartment and exterior lighting demonstration with NVDs. Mission must be flown per T&R Program Manual HLL standards.

Performance Standard. Satisfactory completion per NFM, KC-130 TACMAN (AS REQUIRED), and OPNAVINST 3710.7_.

Prerequisite. MAWTS-1 NVD ASP ground instruction and NITE lab.

Ordinance. N/A

External Syllabus Support. N/A

NS-205 2.0 1 KC-130 A NS

Goal. LLL NVD Operations.

Requirement. Conduct all operations included in NS-204 under LLL conditions.

Performance Standard. Satisfactory completion per NFM, KC-130 TACMAN (AS REQUIRED), and OPNAVINST 3710.7_.

Prerequisite. NS-204.

Ordinance. N/A

External syllabus support. N/A

5. Aerial Refueling Familiarization

a. Purpose. Refine aerial refueling missions per current instructions.

b. General. Conduct normal and emergency procedures associated with aerial refueling in addition to crew responsibilities in both day, night and NVD procedures.

(1) Flight mechanic receiving NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ flight engineer or loadmaster as long as the flight mechanic has met the prerequisites for the event.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Review NATOPS Flight Manual, NATOPS flight manual supplements, NATOPS Air-to-Air Refueling Manual, KC-130 TACMAN, and MAWTS-1 Tactical AR Courseware relating to fixed-wing AR procedures.

e. Flight Training (4 Flights, 16.0 Hours)

AR-210 4.0 1 KC-130/OFT/WST A/S

Goal. Day fixed wing aerial refueling procedures.

Requirement. Review normal and emergency aerial refueling procedures per KC-130 TACMAN and AR Manual. Use of EMCON procedures is optional.

Performance Standard. Perform responsibilities/duties per NFM.

Prerequisite. FM-200

Ordinance. N/A

External syllabus support. Fixed wing receiver aircraft and special use airspace.

AR-211 4.0 1 KC-130/OFT/WST A/S N

Goal. Introduce and refine night fixed wing aerial refueling procedures.

Requirement. Review normal and emergency aerial refueling procedures at night per KC-130 TACMAN and AR Manual. Use of EMCON procedures is optional.

Performance Standard. Perform responsibilities/duties per NFM.

Prerequisite. AR-210.

Ordinance. N/A

External syllabus support. Fixed wing receiver aircraft and special use airspace.

AR-212 4.0 1 KC-130/OFT/WST A/S

Goal. Day helicopter aerial refueling procedures.

Requirement. Review normal and emergency helicopter refueling procedures per KC-130 TACMAN and AR Manual. Use of EMCON procedures is optional.

Performance Standard. Perform responsibilities/duties per NFM.

Prerequisite. AR-210.

Ordinance. N/A

External syllabus support. Rotary wing receiver aircraft and special use airspace.

AR-213

4.0

1 KC-130/OFT/WST A/S N

Goal. Introduce night helicopter aerial refueling procedures.

Requirement. Review normal and emergency helicopter refueling procedures at night per KC-130 TACMAN and AR Manual. Use of EMCON procedures is optional.

Performance Standard. Perform responsibilities/duties per NFM.

Prerequisite. AR-212.

Ordinance. N/A

External syllabus support. Rotary wing receiver aircraft and special use airspace.

6. Tactical Navigation

a. Purpose. Train in low level procedures.

b. General

(1) Flight mechanic conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ flight engineer or loadmaster as long as the flight mechanic has met the prerequisites for the event.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Review NATOPS Flight Manual, KC-130 TACMAN, and MAWTS-1 ASP Low Level Navigation Courseware.

e. Flight Training (3 Flights, 8.0 Hours)

TACNAV-220

2.0

1 KC-130/OFT/WST A/S

Goal. Day low-level procedures.

Requirement. Fly a low level route per KC-130 TACMAN procedures.

Performance Standard. Perform responsibilities/duties per NFM.

Prerequisite. FM-200.

Ordinance. N/A

External syllabus support. N/A

TACNAV-223 3.0 1 KC-130/OFT/WST A/S NS

Goal. NVG HLL low level procedures.

Requirement. Fly a night low level route per KC-130 TACMAN procedures.

Performance Standard. Perform responsibilities/duties per NFM.

Prerequisite. TACNAV-220, NS-204, NS-205.

Ordinance. N/A

External syllabus support. N/A

TACNAV-224 3.0 1 KC-130/OFT/WST A/S NS

Goal. NVG LLL low level procedures.

Requirement. Fly a night low level route per KC-130 TACMAN procedures.

Performance Standard. Perform responsibilities/duties per NFM.

Prerequisite. TACNAV-220, NS-204, NS-205.

Ordinance. N/A

External syllabus support. N/A

7. Formation

a. Purpose. Train in formation procedures.

b. General

(1) Flight mechanic conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ flight engineer or loadmaster as long as the flight mechanic has met the prerequisites for the event.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Review NATOPS Flight Manual, KC-130 TACMAN, and MAWTS-1 ASP Low Level Navigation Courseware.

e. Flight Training (1 Flight, 3.0 Hours)

FORM-231 3.0 2 KC-130/OFT/WST A/S (N)

Goal. Proficiency training in formation procedures.

Requirement. Fly a 2-plane formation flight per NATOPS and TACMAN.

Performance Standard. Perform responsibilities/duties per NFM.

Prerequisite. TACNAV-220.

Ordinance. N/A

External syllabus support. N/A

8. Aerial Delivery

a. Purpose. Refine aerial delivery procedures per current instructions.

b. General

(1) Flight mechanic conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ flight engineer or loadmaster as long as the flight mechanic has met the prerequisites for the event.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Review NFM, KC-130 TACMAN, and MAWTS-1 AD courseware information regarding personnel and cargo delivery procedures.

e. Flight Training (2 Flights, 6.0 Hours)

AD-241 3.0 1 KC-130/OFT/WST A/S

Goal. Introduce aerial delivery procedures.

Requirement. Fly and review aerial delivery mission of cargo or troops per TACMAN.

Performance Standard. Perform responsibilities/duties per NFM.

Prerequisite. FM-200.

Ordinance. N/A

External syllabus support. AD Platoon, USAF CCT, USMC MMT.

AD-242 3.0 1 KC-130/OFT/WST A/S NS

Goal. Introduce NVG aerial delivery procedures.

Requirement. Fly and review aerial delivery mission of cargo or troops and NVG considerations per TACMAN.

Performance Standard. Perform responsibilities/duties per NFM.

Prerequisite. AD-241

Ordinance. N/A

External syllabus support. AD Platoon, USAF CCT, USMC MMT.

9. Long-Range Over Water Operations

- a. Purpose. Refine extended over water procedures.
- b. General. Fly an extended over water flight and review over-water procedures placing emphasis on mission planning, use of aircraft performance data, and engine/fuel logs.
- c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.
- d. Ground/Academic Training. Specific fuel panel procedures, and NATOPS long range cruise considerations.
- e. Flight Training (1 Flight, 8.0 Hours)

<u>LRNAV-250</u>	<u>8.0</u>	<u>1 KC-130 A (N)</u>
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Goal. Refine extended over water procedures.

Requirement. Fly an extended over water flight and review over-water procedures placing emphasis on mission planning, provisions, and fuel requirements.

Performance Standard. Flight mechanic shall perform responsibilities/duties per NFM.

Prerequisite. FM-200.

Ordinance. N/A

External syllabus support. N/A

10. Threat Reaction IR Counter-tactics/ASE Intro

- a. Purpose. Refine the flight mechanic IR counter-tactics procedures.
- b. General
 - (1) Flight mechanic receiving NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ flight engineer or loadmaster as long as the flight mechanic has met the prerequisites for the event.
 - (2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Prior to THRX(I)-261, the flight mechanic shall review pertinent chapters in the KC-130 TACMAN and receive:

- (1) MAWTS-1 ASP course on tactical aircrew coordination.
- (2) MAWTS-1 ASP course on MAGTF Ground Based Air Defense System (GBADS).
- (3) MAWTS-1 ASP course on KC-130 specific threat counter-tactics.
- (4) Specific training on installed KC-130FRT ASE equipment.

e. Flight Training (1 Flight, 2.0 Hours)

<u>THRX-261</u>	<u>2.0</u>	<u>1 KC-130</u>	<u>A</u>	<u>(N)</u>
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Goal. Train in IR counter-tactics duties.

Requirement. Conduct and train in IR counter-tactics. Introduce pertinent ground loading procedures, system setup and operation of ASE systems in flight, emphasis on evasive flight techniques in coordination with ASE employment. Conduct defensive maneuvering against ground IR threat. Emphasize briefing, conduct of flight, and lookout doctrine.

Performance Standard. Flight mechanic shall perform responsibilities/duties per NFM.

Prerequisite. FM-200, TACNAV-220.

Ordinance. 300 decoy flares.

External syllabus support. SST Team.

11. Assault Landing Zones (ALZ)

a. Purpose. Train the flight mechanic on ALZ and Expeditionary Airfield Operations.

b. General

(1) Flight mechanic conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ flight engineer or loadmaster as long as the flight mechanic has met the prerequisites for the event.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Review Assault Landing Zone operations in KC-130 TACMAN. Review MAWTS-1 ASP ALZ courseware. Familiarize the flight mechanic with ground emergencies in an austere environment and performance

data for specific circumstances and applicable pubs for unimproved runway operation.

e. Flight Training (2 Flights, 4.0 Hours)

ALZ-271 2.0 1 KC-130/OFT/WST A/S

Goal. Introduce ALZ procedures at improved fields.

Requirement. Introduce maximum effort takeoffs and landings at improved field per TACMAN. Review all appropriate performance data.

Performance Standard. Flight mechanic shall perform responsibilities/duties per NFM.

Prerequisite. FM-200

Ordinance. N/A

External syllabus support. MMT, CCT.

ALZ-272 2.0 1 KC-130/OFT/WST A/S NS

Goal. Introduce NVG ALZ procedures.

Requirement. Introduce maximum effort takeoffs and landings in a high light level per TACMAN. Review all appropriate performance data.

Performance Standard. Flight mechanic shall perform responsibilities/duties per NFM.

Prerequisite. FM-200, NS-204, ALZ-271.

Ordinance. N/A

External syllabus support. MMT, CCT.

12. Rapid Ground Refueling (RGR)

a. Purpose. Train the in RGR.

b. General

(1) Flight mechanic conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ flight engineer or loadmaster as long as the flight mechanic has met the prerequisites for the event.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Review KC-130 TACMAN RGR procedures and MAWTS-1 ASP RGR courseware. Complete a class that includes but is not

limited to a review of hand and arm signals, defense of site, flight operations around site, and crew responsibilities/CRM on the ground.

e. Flight Training (1 Flight, 0.0 Hours)

RGR-274 0.0 1 KC-130 S (N)

Goal. Train in RGR.

Requirement. Conduct RGR with actual aircraft engines running per NATOPS and TACMAN.

Performance Standard. Flight mechanic shall perform responsibilities/duties per NFM.

Prerequisite. FM-200.

Ordinance. N/A

External syllabus support. N/A

533. CORE SKILL ADVANCED TRAINING

1. General. Upon completion of this phase, the flight mechanic will be proficient in LAT (TACNAV) low level, Assault Landing Zone operations, basic aerial delivery procedures and Defensive Tactics against surface-based threats THRX(R). The purpose of this phase of training is to provide a core skill advanced flight mechanic. Flight mechanics receiving initial training shall be instructed by either Flight Engineer Instructor (RQD-690), or WTI (RQD-692) when required.

2. Tactical Navigation

a. Purpose. Qualify the flight mechanic, or to maintain proficiency for the LAT qualified flight mechanic, in both day and night LAT in the unique tasks and requirements associated with low altitude tactics flights in a low to medium ground threat environment.

b. General

(1) Flight mechanic conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ Flight Engineer or Loadmaster as long as the flight mechanic has met the prerequisites for the event. LAT rules of conduct are contained in KC-130 TACMAN. All LAT sorties require all crewmembers to be LAT qualified and proficient.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Per the MAWTS-1 Course Catalog. Complete MAWTS-1 ASE courseware for LAT and review KC-130 TACMAN or published TTP as appropriate.

e. Flight Training (1 Flight, 3.0 Hours)

TACNAV-321 3.0 R 1 KC-130/OFT/WST A/S

Goal. Introduce and qualify the flight mechanic, or to maintain proficiency for the LAT qualified flight mechanic in the duties associated with low altitude tactics flights in a low to medium ground threat environment.

Requirement. Emphasize cargo compartment preparation, crew briefing, lookout doctrine, scan for threats, crew coordination and combat entry/exit checklists. This event may include air-to-air refueling, aerial delivery or any type of air/land delivery.

Performance Standard. Per the NFM and KC-130 TACMAN.

Prerequisite. FM-200, TACNAV-220.

Ordinance. N/A

External Support. Approved LAT training route, Threat Emitters.

3. Threat Reaction (Radar) (THRX [R])

a. Purpose. Qualify the flight mechanic in the coordinated use of defensive maneuvering and the Aircraft Survivability Suite (ASE) against surface-to-air threat systems. Familiarize the flight mechanic with the procedures incorporated in the use of the RVD.

b. General. Qualify the flight mechanic, or maintain proficiency for the DEFTAC qualified flight mechanic, in the unique tasks and requirements associated with defensive tactics flights in a low to medium air threat environment. This phase of instruction may be taught locally utilizing the MAWTS-1 ASP, or in conjunction with AATTC, by a qualified instructor.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Prior to THRX(R)-360, the flight engineer shall review pertinent chapters in the KC-130 TACMAN and receive:

- (1) MAWTS-1 ASP course on Tactical Aircrew Coordination.
- (2) MAWTS-1 ASP course on MAGTF Ground Based Air Defense System (GBADS).
- (3) MAWTS-1 ASP course on KC-130 Specific Threat Counter-Tactics.
- (4) Specific training on installed KC-130FRT ASE equipment.
- (5) Complete THRX (IR)-261.

e. Flight Training (1 Flight, 3.0 Hours)

THRX-360 3.0 1 KC-130 A (N)

Goal. Train the flight mechanic in IR counter-tactics duties.

Requirement. Conduct and train in Radar Counter-tactics.

Refine FE to pertinent ground loading procedures, system setup and operation of ASE systems in flight, emphasis on evasive flight techniques in coordination with ASE employment. Conduct defensive maneuvering against Radar threat. Emphasize briefing, conduct of flight, and lookout doctrine.

Performance Standard. Flight mechanic shall perform responsibilities/duties per NFM.

Prerequisite. FM-200, TACNAV-220, THRX-261.

Ordinance. 160 decoy chaff, 140 flares.

External syllabus support. Approved LAT training route, Threat Emitters, SST team.

534. CORE PLUS TRAINING

1. General. Upon completion of this level, the flight mechanic will be proficient in unaided tactical navigation, day and night high altitude aerial delivery, battlefield illumination aerial delivery, defensive tactics against an air-based threat, and night time unaided assault landings. Flight mechanics receiving initial training shall be instructed by a current Squadron Stage Instructor, DEFTACI, NSI or WTI (as required). Once they have completed the initial event, subsequent events may be flown with proficient aircrew.

2. Tactical Navigation

a. Purpose. Qualify the flight mechanic, or to maintain proficiency for the LAT qualified flight mechanic, in both day and night LAT in the unique tasks and requirements associated with low altitude tactics flights in a low to medium ground threat environment.

b. General

(1) Flight mechanic conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ flight mechanic as long as the flight mechanic has met the prerequisites for the event. LAT rules of conduct are contained in KC-130 TACMAN. All LAT sorties require all crewmembers to be LAT qualified and proficient.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Per the MAWTS-1 Course Catalog. Complete MAWTS-1 ASE courseware for LAT and review KC-130 TACMAN or published TTP as appropriate.

e. Flight Training (1 Flight, 2.0 Hours)

<u>TACNAV-422</u>	<u>2.0</u>	<u>1 KC-130/OFT/WST A/S N</u>
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Goal. Introduce and qualify the flight mechanic in unaided low level navigation or to maintain proficiency for the

qualified flight mechanic, in the duties associated with night low level flights in a low to medium ground threat environment.

Requirement. Emphasize cargo compartment preparation, crew briefing, lookout doctrine, scan for threats, crew coordination and combat entry/exit checklists. This event may include air-to-air refueling, aerial delivery or any type of air/land delivery.

Performance Standard. Per the NFM and KC-130 TACMAN.

Prerequisite. FM-200, TACNAV-220, TACNAV-321.

Ordinance. N/A

External Support. Approved training route, threat emitters.

3. Aerial Delivery

a. Purpose. Refine high altitude environment aerial delivery procedures per TACMAN.

b. General

(1) Flight mechanic conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ Flight Mechanic as long as the flight mechanic has met the prerequisites for the event.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Review NFM, KC-130 TACMAN, and MAWTS-1 AD courseware information regarding personnel and cargo delivery procedures.

e. Flight Training (2 Flights, 4.0 Hours)

AD-442

2.0

1 KC-130/OFT/WST A/S (N)

Goal. Introduce and qualify the flight mechanic, or to maintain proficiency for the qualified flight mechanic, in the duties associated with high altitude environment aerial delivery.

Requirement. Emphasize cargo compartment preparation, crew briefing, lookout doctrine, scan for threats, crew coordination and combat entry/exit checklists. This event may include air-to-air refueling, aerial delivery or any type of air/land delivery.

Performance Standard. Per the NFM and KC-130 TACMAN.

Prerequisite. FM-200, AD-241.

Ordinance. N/A

External Support. AD Platoon.

AD-444

2.0

1 KC-130/OFT/WST A/S N

Goal. Introduce and qualify the flight mechanic, or to maintain proficiency for the qualified flight mechanic in the duties and procedures associated with battlefield illumination.

Requirement. Emphasize cargo compartment preparation, crew briefing, crew coordination and combat entry/exit checklists.

Performance Standard. Per the NFM and KC-130 TACMAN.

Prerequisite. FM-200, AD-241.

Ordinance. LU-2A/B

External Support. Ordnance personnel, approved training area.

4. Defensive Tactics (DEFTAC)

a. Purpose. Refine the Flight Mechanic duties in Defensive Tactics procedures. Introduce defensive tactics utilized in air-to-air engagements by combining maneuvering and use of the ASE suite. Emphasize lookout doctrine and use of the Rear Vision Device (RVD).

b. General. The DEFTAC qualification requirements consist of DEFTAC-461 and DEFTAC-462. The following is recommended however not required:

(1) Aircraft preferred to have fully operational ASE suite.

(2) If ASE-equipped aircraft is used, appropriate chaff and decoy flares shall be loaded prior to flight.

c. Instructor Requirement. DEFTAC shall be instructed by a WTI.

d. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

e. Ground/Academic Training. Academic prerequisites Per MAWTS-1 KC-130FRT Defensive Tactics Course. Prior to DEFTAC-461, the Flight Mechanic shall receive:

(1) This phase of instruction may be taught locally utilizing the MAWTS-1 ASP, or in conjunction with AATTC, by a qualified Instructor DEFTAC shall be instructed by a DEFTACI/WTI.

(2) MAWTS-1 ASP course on Tactical Aircrew Coordination.

(3) MAWTS-1 ASP course on MAGTF Ground Based Air Defense System (GBADS).

(4) MAWTS-1 ASP course on KC-130 Specific Threat Counter-Tactics.

(5) Specific training on installed KC-130FRT ASE equipment.

f. Flight Training (2 Flights, 4.0 Hours)

DEFTAC-461 2.0 R 1 KC-130, 1 Adversary A

Goal. Introduce defensive tactics mission maneuvering relative to an air threat.

Requirement. The flight mechanic will perform normal and emergency procedures during a flight involving the use of defensive tactics. Emphasize crew briefing, lookout doctrine, scan for air threats and terrain clearance, crew coordination and combat entry/exit checklists. This event may include escorts. Emphasize lookout doctrine and use of the Rear Vision Device (RVD).

Performance Standard. Per the NFM and KC-130 TACMAN.

Prerequisite. FM-200, TACNAV-220, TACNAV-321.

Ordinance. Standard chaff and flare load-out.

External Syllabus Support. Appropriate aggressor aircraft.

DEFTAC-462 2.0 1 KC-130, 2 Adversaries A

Goal. Refine and maintain proficiency for the DEFTAC qualified flight mechanic during a defensive tactics mission maneuvering relative to an air threat.

Requirement. Perform normal and emergency procedures during a flight involving the use of defensive tactics. Emphasize crew briefing, lookout doctrine, scan for air threats and terrain clearance, crew coordination and combat entry/exit checklists. This event may include escorts. Emphasize lookout doctrine and use of the Rear Vision Device (RVD).

Performance Standard. Per the NFM and KC-130 TACMAN.

Prerequisite. FM-200, TACNAV-220, TACNAV-321, DEFTAC-461.

Ordinance. Standard chaff and flare load-out.

External Syllabus Support. Appropriate aggressor aircraft.

5. Assault Landing Zones (ALZ)

a. Purpose. Train on ALZ and Expeditionary Airfield Operations.

b. General

(1) Flight mechanic conducting NS training shall be instructed by an NSI for all NSQ syllabus initial codes. Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ flight engineer or loadmaster as long as the flight mechanic has met the prerequisites for the event.

(2) A qualified instructor (FE) shall accompany all initial qualified crewmembers.

c. Crew Requirements. NATOPS minimum crew or greater unless otherwise specified for the event.

d. Ground/Academic Training. Review ALZ operations in KC-130 TACMAN. Review MAWTS-1 ASP ALZ courseware. Familiarize the student with ground emergencies in an austere environment and performance data for specific circumstances, and review applicable pubs for unimproved runway operation.

e. Flight Training (1 Flight, 2.0 Hours)

ALZ-471 2.0 1 KC-130/OFT/WST A/S N

Goal. Introduce unaided TLZ procedures at improved/unimproved fields.

Requirement. Be exposed to unaided maximum effort takeoffs and landings at improved field per TACMAN. Review all appropriate performance data.

Performance Standard. Perform responsibilities/duties per NFM.

Prerequisite. FM-200, ALZ-271.

Ordinance. N/A

External Syllabus Support. MMT, CCT.

550. REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS

1. Purpose. To provide a vehicle for tracking codes associated with qualifications and designations.

2. General

a. E-coded sorties are evaluation sorties. E-coded sorties in the 600-level phase may be logged in conjunction with any sortie that completes its stage. CRP is not awarded for these 600-level sorties; however, CRP credit may be obtained by logging the appropriate training code(s) in the 200-400 level syllabus. Once the flight to attain the qualification/designation is complete, a letter from the squadron commanding officer awarding the qualification/designation shall be placed in the NATOPS and APR before that qualification/designation can be utilized.

b. After the commanding officer has designated the trainee in writing as a flight mechanic, the operations department shall log RQD-680.

3. Functional Check Flight (FCF) Qualifications

a. Purpose. Qualify in FCF procedures.

b. Flight Training (1 Flight, 2.0 Hours)

RQD-602 Functional Check Flight 2.0 1 KC-130 A

Goal. Qualify flight mechanic in FCF procedures.

Requirement. Assist the flight engineer with an engine run and maintenance system operational checks. Be familiar with all aspects of pre-flight and post flight procedures involved with an FCF.

Performance Standard. Satisfactorily execute procedures per the NFM, OPNAVINST 3710.7__, and OPNNVINST 4790.2__.

4. Rear Viewing Device (RVD) Tracking Code

a. Purpose. Provide a tracking code RVD.

b. General. Conduct THRX/DEFTAC flight using RVD from forward escape hatch position. Emphasize lookout doctrine, scan for air threats, terrain clearance, and crew coordination.

(1) This flight may be flown in conjunction with any threat reaction, THRX, or DEFTAC.

(2) The following is recommended:

(a) Aircraft preferred to have fully operational ASE suite.

(b) If ASE-equipped aircraft is used, appropriate chaff and decoy flares shall be loaded prior to flight.

c. Ground Training. Academic prerequisites per MAWTS-1 KC-130FRT Defensive Tactics Course. This phase of instruction may be taught locally utilizing the MAWTS-1 ASP, or in conjunction with AATTC, by a qualified DEFTACI/WTI. Prior to DEFTAC-461, the flight mechanic shall receive:

(1) MAWTS-1 ASP course on Tactical Aircrew Coordination.

(2) MAWTS-1 ASP course on MAGTF Ground Based Air Defense System (GBADS).

(3) MAWTS-1 ASP course on KC-130 Specific Threat Counter-Tactics.

(4) Specific training on installed KC-130FRT ASE equipment.

d. Flight Training (1 Flight, 2.0 Hours)

RQD-605 2.0 1 KC-130 A

Goal. Qualify and maintain currency for the flight mechanic proficiency in RVD procedures.

Requirement. Conduct THRX/DEFTAC flight using RVD from forward escape hatch position. Emphasize lookout doctrine, scan for air threats, terrain clearance, and crew coordination.

Performance Standard. Satisfactorily execute procedures per the TACMAN, NFM, and OPNAVINST 3710.7__.

Prerequisite. FM-200, TACNAV-220, TACNAV-321.

Ordinance. Standard chaff and flare load-out.

5. Night Systems Qualification (NSQ)

a. Purpose. NSQ qualification.

b. General. Flight mechanic receiving instruction leading to NSQ will be qualified in the equivalent day sortie.

(1) An NSI crewmember shall conduct this phase of instruction.

(2) NVG time logged as part of NITE lab will count towards NSQ qualification.

c. Ground Training. MAWTS-1 NVD ASP courses and NITE lab (includes Night Vision Systems, N.S. Human Factors and Night Environment ASPs).

d. Flight Training (1 Flight, 4.0 Hours)

RQD-611 4.0 1 KC-130 A NS

Goal. Qualify in flights using NVDs.

Requirement. Demonstrate ability to perform flight mechanic duties using NVDs.

Performance Standard. Satisfactorily execute the procedures per NFM, KC-130 TACMAN, TTP (AS REQUIRED), and MAWTS-1 ASP for NSQ.

Prerequisite. NS-204, NS-205, RQD-681 (FM-1).

6. Flight Mechanic NATOPS Evaluations

a. Purpose. Evaluate per NATOPS procedures.

b. General. Flight mechanic evaluations will be conducted during this phase. Upon successful completion of these stages, the flight mechanic under instruction shall be designated the appropriate level of qualification.

c. Crew Requirements. Minimum crew and flight mechanic assistant NATOPS instructor.

d. Flight Training (3 Flights, 12.0 Hours)

RQD-680 4.0 E, R 1 KC-130 A (N)

Goal. Flight mechanic initial NATOPS evaluation (FM-2).

Requirement. NATOPS instructor/evaluator will evaluate student flight mechanic per NATOPS procedures. RON flight is preferred.

Performance Standard. Perform responsibilities/duties per NFM, 3710.7_, 4790.2_ and associated MIMS.

Prerequisite. All core skill introduction codes.

RQD-681 4.0 R, E 1 KC-130 A (N)

Goal. Flight mechanic basic NATOPS evaluation (FM-1).

Requirement. NATOPS instructor/evaluator will evaluate flight mechanic per NATOPS procedures. RON flight is preferred. Should be either AR, AD, LL, ALZ, RGR, or combination mission. RON flight is preferred.

Performance Standard. Perform responsibilities/duties per NFM, TACMAN, 3710.7_, 4790.2_ and associated MIMS.

Prerequisite. FAM-200 through FAM-274, RQD-611.

RQD-682 4.0 R, E 1 KC-130 A

Goal. Annual NATOPS evaluation and subsequent annual evaluations.

Requirement. NATOPS instructor/evaluator will evaluate flight mechanic per NATOPS procedures. RON flight is preferred. Should be either AR, AD, LL, ALZ, RGR, or combination mission. RON flight is preferred.

Performance Standard. Perform responsibilities/duties per NFM, TACMAN, 3710.7_, 4790.2_ and associated MIMS.

Prerequisite. Successful completion of NATOPS open and closed books tests per NFM.

561. SYLLABUS MATRIX

AIRCRAFT: KC-130

MOS: 6276 CREW POSITION: FLIGHT MECHANIC

CORE INTRODUCTION

STAGE	CODE	EVENT	HRS	CRP	REFLY	C	R	E	NS	NSQ	REMARKS
FAM	000	GROUND FAM	4.0	4.0	*		X				
FAM	100	PREFLIGHT	4.0	4.0	*		X				
FAM	101	ENGINES	4.0	4.0	*	X	X				
FAM	102	PROPS	4.0	4.0	*		X				
FAM	103	ELECTRICAL	4.0	4.0	*	X	X				
FAM	104	BLEED AIR	4.0	4.0	*	X	X				
FAM	105	FUEL SYSTEMS	4.0	4.0	*	X	X				
FAM	106	HYDRAULICS	4.0	4.0	*		X				
FAM	107	AIR COND/OXYGEN	4.0	4.0	*	X	X				
FAM	108	COMM/NAV	4.0	4.0	*	X	X				
FAM	109	FWAR	4.0	4.0	*		X				
FAM	110	HAR	4.0	4.0	*		X				
FAM	111	AR OBS EVAL	4.0	4.0	*		X	X			
FAM	112	LOW LEVEL	4.0	4.0	*		X				
FAM	113	PRE CHECK	4.0	4.0	*		X				

CORE BASIC

STAGE	CODE	HRS	REFLT	CRP	REMARKS
FM	200	2.0	90	1.0	
NS	204	2.0	365	0.5	NS
NS	205	2.0	365	0.5	NS
AR	210	4.0	365	0.5	
AR	211	4.0	365	1.0	N
AR	212	4.0	365	0.5	
AR	213	4.0	365	1.0	N
TACNAV	220	2.0	365	1.0	
TACNAV	223	3.0	180	1.0	NS
TACNAV	224	3.0	180	1.0	NS
FORM	231	3.0	180	0.5	2 AC (N)
AD	241	3.0	365	0.5	
AD	242	3.0	365	1.0	NS
LRNAV	250	8.0	365	1.0	(N)
THRX	261	2.0	365	1.0	(N)
ALZ	271	2.0	180	1.0	
ALZ	272	2.0	365	1.0	NS
RGR	274	0.0	365	1.0	(N)

CORE SKILL ADVANCED

STAGE	CODE	HRS	REFL	CRP	R	REMARKS
TACNAV	321	3.0	365	10.0	X	
THRX	360	3.0	365	10.0		(N)

CORE PLUS

STAGE	CODE	HRS	REFLT	CRP	R	E	REMARKS
TACNAV	422	2.0	*	1.0			N
AD	442	2.0	*	0.5			
AD	444	2.0	*	0.5			N
DEFTAC	461	2.0	*	1.0	X		
DEFTAC	462	2.0	*	1.0			
ALZ	471	2.0	*	1.0			N

REQUIREMENTS, QUALIFICATIONS, AND DESIGNATIONS

STAGE	CODE	HRS	A/C OR SIM	R	E	NOTES
RQD	602	2.0	A			FCF QUALIFICATIONS
RQD	605	2.0	A			RVD FAMILIARIZATION TRACKER
RQD	611	4.0	A			NSQ
RQD	680	4.0	A	X	X	FM-2 NATOPS CHECK
RQD	681	4.0	A		X	FM-1 NATOPS CHECK
RQD	682	4.0	A		X	FM ANNUAL NATOPS REFLY 365

562. T&R CHAINING TABLES. Event chaining allows for the completion of more complex and/or advanced events using the same skills to update proficiency status of events. Only events in a sequence entailing demonstration of equivalent skills shall be chained.

a. When a T&R event is logged, the proficiency dates of other T&R events (usually lower in number) may be updated. The T&R code that is logged is known as the "chaining code," and the updated codes are "chained codes." Chained codes are not always updated when a chaining code is logged.

b. Conditional Chaining. The following environmental conditions further specify which T&R codes are chain-updated.

(1) Night Optional. Chained codes annotated with parentheses around them, e.g. (200), are only chain-updated if the chaining code is flown at night.

(2) Night Systems Optional. Chained codes annotated with parentheses and NS after them, e.g. (200 NS), are only chain-updated if the chaining code is flown using night systems.

(3) Light Level Optional. Chained codes annotated with parentheses and HLL after them, e.g. (200 HLL), are only chain-updated if the chaining code is flown using NS during a high light level period. Chained codes annotated with parentheses and LLL after them, e.g. (200 LLL), are only chain-updated if the chaining code is flown using NS during a low light level period.

c. Syllabus Event Conversion Matrix. The syllabus event conversion matrix is used to convert T&R syllabus event proficiency status of the previous T&R syllabus into event proficiency status of the current T&R for individuals.

EVENT UPDATE CHAINING

<u>FLIGHT</u>	<u>FLIGHTS UPDATED</u>
200	
204	200
205	200, 204
210	200
211	200, 210
212	200
213	200, 212
220	200
223	200, 220
224	200, 220, 223
231	200
241	200
242	200, 204, 205, 241
250	200
261	200, 220
271	200
272	200, 204, 205, 271
274	200
321	200, 220
360	200, 220, 261
422	200, 220
442	200, 241
444	200, 241
461	200, 220

FLIGHT **FLIGHTS UPDATED**

462 200, 220, 461

471 200, 271

681 680

682 680, 681

OLD STAGE	NEW TRAINING CODE	NEW STAGE	NEW TRAINING CODE
CK 190	RQD 680	LAT 432	TACNAV 321
		LAT 433	TACNAV 321
FM 200	FM 200	LAT 434	TACNAV 321
FM 201	FM 200	DEFTAC 460	DEFTAC 461
AR 210		DEFTAC 461	DEFTAC 462
AR 211		DEFTAC 462	DELETED
AR 212			
AR213			
LL 220	TACNAV 220		
LL 221	TACNAV 422		
FORM 230	FORM 231		
FORM 231	FORM 231	NUC 600	DELETED
AD 240	AD 241	NVG 610	DELETED
OWICAO 250	LRNAV 250	NVG 601	NS 204 / NS 205
TLZ 270	ALZ 271	NVG 620	TACNAV 223
RGR 273	RGR 274	NVG 621	TACNAV 224
FCF 280	RQD 602	NVG 622	DELETED
CK 290	RQD 681	NVG 630	FORM 231
		NVG 640	AD 242
LLAR 310	DELETED	NVG 660	DELETED
LLAR 311	DELETED	NVG 670	ALZ 272
LLAR 312	DELETED	NVG 671	ALZ 273
LLAR 313		NVG 690	RQD-611
OLAR 314	DELETED	NVG 695	DELETED
OLAR 315	DELETED		RQD-605 RVD
AD 340	AD 241 442		
AD 343	AD 444		
ASE 360	THRX (I) 261 (R) 360		
TLZ 370	ALZ 271		
TLZ 371	ALZ 471		
RGR 373	RGR 274		
CK 390	RQD 682		